TUESDAY POSTERS

INSTRUMENTATION: ION SOURCES I

TP 004 **Development of a Novel Dual Nebulizer Electrospray Ionization Source for Mass Calibration Reference Correction in Time-of-Flight Mass Spectrometry;** Matthew Giardina; Viatcheslav Artaev; *LECO Corporation, St. Joseph, MI*

TP 005 **Laser Induced Acoustic Desorption/Electrospray Ionization/Mass Spectrometry (LIAD/ESI/MS) for the Detection of Synthetic Polymers and Proteins in Solids under Ambient Conditions**; Sy-Chyi Cheng; Jentaie Shiea; *National Sun Yat-Sen University, Kaohsiung, Taiwan*

TP 006 **Evaluation of an Atmospheric Pressure Resistive Glass Ion Guide to Increase Ion Transfer Efficiency**; Christopher Hilton; Marilyn Prieto; Richard Yost; *University of Florida, Gainesville, FL*

TP 007 **Evaluation of a Novel Vortex-Inducing Air Amplifier for Enhanced Atmospheric Pressure Ion Source Performance**; Marilyn Prieto; Christopher Hilton; Richard Yost; David Powell; *University of Florida, Gainesville, FL*

TP 008 **Effects of Matrix and Electrospray Solution Composition on Desorption and Ionization of Proteins in Electrospray-Assisted Laser Desorption Ionization Mass Spectrometry**; Ya-Lin Ma; Min-Zong Huang; Jentaie Shiea; *National Sun Yat-Sen University, Kaohsiung, Taiwan*

TP 009 **Observation of the Large Dicobalt Dendrimer Complex on CSI-FT-ICR-MS**; Kazunori Saito[1]; Hisashi Shimakoshi[2]; Daisuke Higo[1]; Shinichi Miki[1]; Yoshihisa Sei[3]; Kentaro Yamaguchi[3]; Yoshio Hisaeda[2]; *[1]Bruker Daltonics KK, Yokohama, JAPAN; [2]Kyushu Univeristy, Fukuoka, Japan; [3]Tokushima Bunri Univeristy, Sanuki, Japan*

TP 010 **Detecting Organic Compounds Dissolved in Volatile Organic Solvents and Continuously Monitoring Chemical Reactions by Ambient Liquid Mass Spectrometry (ALMS)**; Jingyueh Jeng[2]; Cheng-Hui Yuan[1]; Jentaie Shiea[1]; *[1]National Sun Yat-Sen University, Kaohsiung, Taiwan; [2]Cha-Nan University of Pharmacy and Science, Tinan, Taiwan*

TP 011 **A Microchip APPI Device for Combining GC or LC with MS**; Markus Haapala[1]; Laura Luosujärvi[1]; Ville Saarela[2]; Tapio Kotiaho[1]; Raimo Ketola[1]; Sami Franssila[2]; Risto Kostiainen[1]; *[1]University of Helsinki, Helsinki, Finland; [2]Helsinki University of Technology, Espoo, Finland*

TP 012 **Porous Alumina Surface as a Dual Ionization Laser Desorption Ionization (LDI)-Desorption Electrospray Ionization (DESI) Platform for Increased Peptide Coverage**; Ranu Nayak[1]; Ashis K. Sen[2]; Jian Liu[1]; Daniel R. Knapp[1]; *[1]Medical University of South Carolina, Charleston, SC; [2]University of South Carolina, Columbia, SC*

TP 013 **Electrospray-Assisted Laser Desorption Ionization (ELDI) and Tandem Mass Spectrometry for Proteomic Studies**; Ivory X. Peng[1]; Jentaie Shiea[2]; Joseph A. Loo[1]; *[1]UCLA, Los Angeles, CA; [2]National Sun Yat-Sen University, Kaohsiung, Taiwan*

TP 014 **Field-Free Atmospheric Nebulizers and Discharges**; Edward W. Sheehan; Ross C Willoughby; *Chem-Space Associates, Inc., Pittsburgh, PA*

TP 015 **Development and Testing of a Computer-Controlled Dual Polarity Dual nanoESI Source on a Quadrupole Ion Trap for Ion/Ion Reactions**; Ryan M. Danell[2]; Matthew J. Myer[1]; Allison S. Danell[1]; *[1]East Carolina University, Greenville, NC; [2]Danell Consulting, Greenville, NC*

TP 016 **A New Chip-Based ESI Device Fabricated by Injection Moulding**; Laura A Croasdell; Leonard A. Dillon; Peter R. Fielden; Nick J. Goddard; Victoria N. Stone; C. L. Paul Thomas; *The University of Manchester, Manchester, United Kingdom*

TP 017 **Electrospray Efficiency from the Nanoflow to the High Flow Regime**; Hassan Javaheri; Bradley B, Schneider; Thomas R. Covey; *MDS Sciex, Concord, Canada*

TP 018 **Ambient Liquid Mass Spectrometry (ALMS): Detection of Native Protein Ions Directly from Liquids and Biological Fluids Under Ambient Conditions**; Cheng-Hui Yuan; Ya-Lin Ma; Jentaie Shiea; *National Sun Yat-Sen University, Kaohsiung, Taiwan*

TP 019 **A New Approach to Atomization of an Electrospray Ion Source**; Charles Jolliffe[1]; Lisa M. Cousins[1]; Gholamreza Javahery[1]; Seguei Savtchenko[1]; Nasser Ashgriz[2]; *[1]IONICS Mass Spec Group, Inc., Concord, CANADA; [2]University of Toronto, Toronto, Ontario*

TP 020 **Micropillar Array Electrospray Chip for Analysis of Biomolecules**; Teemu J. Nissilä[1]; Lauri Sainiemi[2]; Tiina Sikanen[1]; Tapio Kotiaho[1]; Sami Franssila[2]; Risto Kostiainen[1]; Raimo A. Ketola[1]; *[1]University of Helsinki, Helsinki, Finland; [2]Helsinki University of Technology, Helsinki, Finland*

TP 021 **The Effect of Ionspray Voltage, Flow Rate and Solvent Composition on an External Porous Polymer Monolith Electrospray Interface's Signal Stability**; Stephen S.H. Lee; Richard D. Oleschuk; *Queen's University, Kingston, CANADA*

INSTRUMENTATION: NEW CONCEPTS II

TP 022 **The Ion Funnel Interface for MALDI Ion Source Operating at Intermediate Pressure**; Vadym Berkout; *MassTech, Inc., Columbia, MD*

TP 023 **Top Down *de novo* Sequencing using Electron Capture Dissociation in Radio Frequency Ion Trap**; Hiroyuki Satake[1]; Hideki Hasegawa[1]; Atsumu Hirabayashi[1]; Yuichiro Hashimoto[1]; Takashi Baba[1]; Izumi Waki[1]; Katsuyoshi Masuda[2]; *[1]Central Research Laboratory, Hitachi Ltd., Tokyo, JAPAN; [2]Suntory Institute for Bioorganic Research, Osaka, Japan*

TP 024 **Reactive and Soft Landing of Horseradish Peroxidase Cations on *in-situ* Plasma Treated Dry Metal Surfaces**; Matthew J. Diener; Michael Volny; William T. Elam; Frantisek Turecek; *University of Washington, Seattle, WA*

TP 025 **Kinetics of Desorption of Protonated Peptides Soft Landed onto Self-Assembled Monolayer Surfaces (SAMs)**; Omar Hadjar; Jean H. Futrell; Julia Laskin; *PNNL, Richland, WA*

TP 026 **Development of a Handheld Gas-Phase Sample Collection System for Use with a Fieldable Mass Spectrometer**; John Grossenbacher; Adam Keil; J. Mitchell Wells; Garth Patterson; Mark Gregory; Matthew Briscoe; Jason Springston; Dennis Barket, Jr; *Griffin Analytical Tech., LLC, West Lafayette, IN*

TP 027 **Ion source for Doping of Superfluid Helium Nanodroplets with a High Flux of Low Kinetic Energy Alkali Cations**; Mark E. Ridgeway[1]; Travis M. Falconer[1]; Raymond J. Bemish[2]; Gary L. Glish[1]; *[1]University of North Carolina, Chapel Hill, NC; [2]Pfizer Inc., Groton, CT*

TP 028 **Using Superfluid Helium Nanodroplets to Form Ultracold Ions**; Travis M. Falconer[1]; Mark E. Ridgeway[1]; Raymond J. Bemish[2]; Gary L. Glish[1]; *[1]University of North Carolina, Chapel Hill, NC; [2]Pfizer, Inc., Groton, CT*

TP 029 **Inline Electrospray Current Conductivity Detection for Characterization of Mobile Phase Composition and Gradient Delay**; Adam W Perala; Gary A. Valaskovic; *New Objective, Inc., Woburn, MA*

TP 030 **High-Throughput Improvements for Preparative Mass Spectrometry**; Qingyu Song; Scott A Smith; Zheng Ouyang; R.G. Cooks; *Purdue University, West Lafayette, IN*

TP 031 **Surface Ionization Mass-Spectrometry of Pesticides of Quaternary Ammonium Salts on the Basis of Dipyridyle**

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Derivatives; Usman Khasanov-[1]; Utkur Rasulev[1]; Dilshodbek Usmanov[1]; Aviv Amirav[2]; *[1]Arifov Institute of Electronics, Tashkent, Uzbekistan; [2]Tel Aviv University, Tel Aviv, Israel*

TP 032 **Surface Roughness Effects on Dimensionally-Scaled Ion Traps**; Wei Xu; Meng Yu; Zheng Ouyang; Graham R. Cooks; William Chappell; *Purdue University, West Lafayette, IN*

TP 033 **Development of an Ion Trap/Orthogonal-TOF Mass Spectrometer for UV Photodissociation of Biomolecules**; Tae-young Kim; James P. Reilly; *Indiana University, Bloomington, IN*

TP 034 **Multi-Dimensional Mass Spectrometry using a Linear Ion Trap with Mass-selective Axial Ejection Capability**; Yuichiro Hashimoto; Masuyuki Sugiyama; Hideki Hasegawa; *Hitachi, Ltd, Central Research Lab, Kokubunji, Tokyo, Japan*

TP 035 **Reactive and Soft Landing of Polyatomic Hyperthermal Ions on Plasma-Treated Metal Surfaces**; Michael Volny; Karl E. Jackson; W. Tim Elam; Frantisek Turecek; *University of Washington, Seattle, WA*

TP 036 **A Novel Interface for Ion Focusing at Elevated Pressures Based on the Tripole RF Ion Guide**; Alexander S. Misharin; Eugene Moskovets; Chaminda M. Gamage; Vladimir M. Doroshenko; Andrey N. Vilkov; *MassTech, Inc., Columbia, MD*

TP 037 **Mini 11 Handheld Mass Spectrometer with an Atmospheric Pressure Interface and a Glow Discharge Source**; Liang Gao[1]; Xinzhao Huang[1]; Ray S. Milks[1]; Jason S. Duncan[1]; Bob K. Schoder[2]; R. Graham Cooks[1]; Zheng Ouyang[1]; *[1]Purdue University, West Lafayette, IN; [2]Creare Inc., Hanover, NH*

TP 038 **Calibration Methods and Recent Deployments of a Membrane Introduction Underwater Mass Spectrometer**; Ryan J. Bell[1]; Strawn K. Toler[2]; R. Timothy Short[3]; Robert H. Byrne[1]; *[1]College of Marine Science, St Petersburg, FL; [2]Center for Ocean Technology, St Petersburg, FL; [3]SRI-St. Petersburg, St. Petersburg, FL*

TP 039 **Bipolar Ion Detector with Enhanced Sensitivity by Sequential Conversion Reactions**; Ming-Hsin Li; Shan-Ting Tsai; Chung-Hsuan Chen; Yi-Sheng Wang; *Academia Sinica, Taipei, Taiwan*

TP 040 **Dual-Source Mass Spectrometer with MALDI-LIT-ESI Configuration**; Scott A. Smith; Thomas A. Blake; Demian R. Ifa; R. Graham Cooks; Zheng Ouyang; *Department of Chemistry, Purdue University, West Lafayette, IN*

ION MOBILITY APPLICATIONS

TP 041 **Ion Mobility - Mass Spectrometry as a Tool for Structural Investigation of High m/z Species**; Iain Campuzano[1]; Kevin Giles[1]; James Langridge[1]; Albert Heck[2]; Cees Versluis[2]; *[1]Waters Corporation, Manchester, United Kingdom; [2]Utrecht University, Utrecht, Netherlands*

TP 042 **FAIMS/MS Characterization of Insecticides and Repellents used to Protect Deployed Military Personnel from Insect-Borne Diseases**; Erick Molina; *University of Florida, Gainesville, FL*

TP 043 **Improving Peptide/Protein Identification with High-Resolution Ion Mobility-Mass Spectrometry Techniques**; Brent Williams[1]; Stephen Valentine[1]; Adam Culbertson[1]; Stormy Koeniger[2]; Xiaoyun Liu[2]; Ruwan T. Kurulugama[2]; S. Sevugarajan[2]; David E. Clemmer[2]; Stephen Naylor[1]; *[1]Predictive Physiology and Medicine, Inc., Bloomington, IN; [2]Indiana University, Bloomington, IN*

TP 044 **Oscillations of Chiral Preference in Proline Clusters**; Sunnie Myung[2]; Patrick K. Lorton[1]; Stormy L. Koeniger[3]; Manolo D. Plasencia[1]; Ryan R. Julian[4]; Mu-Hyun Baik[1]; David E. Clemmer[1]; *[1]Department of Chemistry at Indiana University, Bloomington, IN; [2]Rockefeller University, NY, NY; [3]Abbott Laboratories, Abbott Park, Illinois; [4]Department of UC Riverside, Riverside, CA*

TP 045 **Pushing LDI-IM-oTOF Interface to its Limits: Theoretical and Experimental Ionic Cluster Studies using Selective Collisional-Energy Transfer;** F. A. Fernandez-Lima[1]; C. Becker[1]; W. Sun[1]; K. Gillig[1]; M. Chaer-Nascimento[2]; D.H. Russell[1]; *[1]Laboratory for Biological Mass Spectrometry, College Station, TX; [2]Departamento de Quimica- Fisica, UFRJ, Rio de Janeiro, Brasil*

TP 046 **Separation and Identification of Chlorinated Phenols using Liquid Chromatography with Ion Mobility Spectrometry**; Fatkhulla Tadjimukhamedov[1]; Wolfgang Mueller[1]; Dimitrios Papanastasiou[1]; Hermann Wollnik[2]; Gary Eiceman[1]; *[1]New Mexico State University, Las Cruces, NM; [2]Shimadzu Corporation, Kyoto, Japan*

TP 047 **An Investigation of Protein Therapeutics Including Antibodies and Antibody Conjugates with Ion Mobility Spectrometry**; Bruce Andrien[1]; Rekha Patel[1]; Lynellen Willard[1]; Rachael Alford[1]; Phillip Tan[2]; *[1]Alexion Pharmaceuticals, Chesire, CT; [2]TSI Incorporated, Shoreview, MN*

TP 048 **Separation of Post-Translationally Modified and Analogous Tryptic Peptide Ions by High-Field Asymmetric-Waveform Ion Mobility/ Mass Spectrometry**; Jennifer A. Garrett[1]; Christopher K. Hilton[1]; Matthew J. Pollard[2]; Herbert H. Hill, Jr.[2]; Richard A. Yost[1]; *[1]University of Florida, Gainesville, FL; [2]Washington State University, Pullman, WA*

TP 049 **DNA Nanostructures in the Gas Phase;** Marvin M Seibert[1]; Michael J Bogan[2]; *[1]Uppsala Universitet, Uppsala, Sweden; [2]Lawrence Livermore National Laboratory, Livermore, CA*

TP 050 **Simultaneous Glycomic and Proteomic Strategies using Structural Mass Spectrometry**; Larissa S. Fenn; John A. McLean; *Vanderbilt University, Nashville, TN*

TP 051 **Structural Characterization of Pegylated Protein Therapeutics using Ion Mobility Time-of-Flight Mass Spectrometry and Ion/Molecule Chemistry**; Paul Schnier; Dhanashri Bagal; Ryan Holder; Heidi Zhang; Jifeng Zhang; *Amgen, Thousand Oaks, CA*

TP 052 **Evaluating Gas Phase Structure: Coupled H/D Exchange-Ion Mobility Mass Spectrometry**; Christopher Becker; Lei Tao; Yiqun Huang; David Russell*; *Texas A&M University, College Station, TX*

TP 053 **Stoichiometry of Antibody Aggregates and Complexes Measured by MacroIon Mobility Spectrometry (IMS)**; Louisette Basa[1]; Katherine Lancaster[1]; Bao-jen Shyong[1]; Phillip Tan[2]; Viswanatham Katta[1]; *[1]Genentech, Inc., South San Francisco, CA; [2]TSI, Inc, Shoreview, MN*

TP 054 **Study of Lipids in Tissues by Ion Mobility Time-of-Flight Mass Spectrometry**; Michael V. Ugarov[1]; Thomas F. Egan[1]; J. Albert Schultz[1]; Larissa S. Fenn[2]; Michal Kliman[2]; John A. McLean[2]; Shelley N. Jackson[3]; Hay-Yan J. Wang[3]; Amina S. Woods[3]; *[1]Ionwerks, Houston, TX; [2]Vanderbilt University, Nashville, TN; [3]NIDA IRP, Baltimore, MD*

TP 055 **Proteomic Coverage Comparison of On and Offline LC-IMS-MS with Traditional LC-MS Platforms**; Erin Shammel Baker; Brian H. Clowers; Keqi Tang; Eric Livesay; Daniel Orton; William Danielson; Deep Jaitly; Anoop Mayampurath; Fumin Li; Mikhail Belov; Richard D. Smith; *PNNL, Richland, WA*

TP 056 **Structural Studies of Small Molecule Radical Cations using a Variable Temperature Ion Mobility Apparatus**;

Jody C. May; Ryan C. Blase; Kent J. Gillig; David H. Russell; *Texas A&M University, College Station, TX*

TP 057 **Ion Mobility-Mass Spectrometry: An aid to Hemoglobin Variant Identification**; Jonathan P Williams[1]; James H Scrivens[1]; Kevin Giles[2]; Brian N Green[2]; Robert H Bateman[2]; *[1]university of warwick, coventry, United Kingdom; [2]Waters, Manchester, UK*

TP 058 **Separation of Ligand-Coordinated Carbohydrate Isomers by Ambient Pressure Ion Mobility (Time-of-Flight) Mass Spectrometry**; Maolei HARRY Zhu[1]; Brad Bendiak[2]; Prabha Dwivedi[1]; Kim Kaplan[1]; Mathew Pollard[1]; Herbert H. Hill[1]; *[1]Washington State University, Pullman, WA; [2]Health Sciences Center, University of Colorado, Denver, CO*

ION MOLECULE REACTIONS

TP 059 **Testing Molecular Wire Conductivity by Tandem Mass Spectrometry**; Karen E. Joyce[1]; Meng Lu[2]; Ronald J. Wysocki Jr. [1]; James M. Tour[2]; Vicki H. Wysocki[1]; *[1]University of Arizona, Tucson, AZ; [2]Rice University, Houston, TX*

TP 060 **Investigation of H_2O and O_2 Addition to Gas-Phase Acetonitrile-Coordinated Vanadyl-Halide Cations**; Christopher M. Leavitt[1]; Huanani M. Thomas[2]; Gary S. Groenewold[3]; Garold Gresham[3]; Carol A. Deakyne[2]; Michael J. Van Stipdonk[1]; *[1]Wichita State University, Wichita, KS; [2]University of Missouri, Columbia, MO; [3]Idaho National Laboratory, Idaho Falls, ID*

TP 061 **Cluster Ions as Reagent Species in Ion-Ion Reactions with Multiply Charged Biomolecules**; Jeremiah Bowers; Brittany D.M. Hodges; Scott A. McLuckey; *Purdue University, West Lafayette, IN*

TP 062 **The Study of Para-Benzynes via Gas-Phase Ion-Molecule Reactions in a Fourier-Transform Ion Cyclotron Resonance Mass Spectrometer**; Lindsey M. Kirkpatrick; Hilkka I. Kenttamaa; *Purdue University, West Lafayette, IN*

TP 063 **The Influence of a Hydroxy Substituent on the Reactivity of the 2,4,6–Tridehydropyridinium Ion**; Bartlomiej J. Jankiewicz; John J. Nash; Hilkka I. Kenttämaa; *Purdue University, West Lafayette, IN*

TP 064 **Reactivity of Cationic Metal-Aromatic/Cyclic Clusters**; Gregory K. Koyanagi; Diethard K. Bohme; *York University, Toronto, CANADA*

TP 065 **H/D exchange of deprotonated amino acids and peptides**; Zhixin Tian; Steven R. Kass; *Department of chemistry, University of Minnesota, Minneapolis, MN*

TP 066 **Using Structurally Diagnostic Fragment Ions to Distinguish Constitutional Isomers by MS^2: The case of α-Acylnaphthones and β-Acylnaphthones**; Mario Benassi Neto; Marcos N. Eberlin; *ThoMSon Mass Spectrometry Laboratory - UNICAMP, Campinas, Brazil*

TP 067 **Reactivity and Kinetics of meta-bis-allylphenyl anion**; Matthew Lenington; Paul G. Wenthold; *Purdue University, West Lafayette, IN*

TP 068 **Chemical Noise Reduction in Mass Spectrometry using Selective Ion-Molecule Reactions**; Michael J. Y. Jarvis; Gregory K. Koyanagi; Diethard K. Bohme; *York University, Toronto, Canada*

TP 069 **Application of Gas-Phase Ion-Molecule Reactions in Mass Spectrometric Identification of the Functionalities in Amino Acids**; Sen Li; Mingkun Fu; Hilkka I. Kenttämaa; *Purdue University, West Lafayette, IN*

TP 070 **Identification of the Amino Functional Group in Protonated Pre-Derivatized Analytes by Mass Spectrometry**; Karinna Campbell[1]; Sen Li[1]; Jennifer Reece[1]; Hilkka Kenttämaa[1]; Brian Winger[2]; *[1]Purdue University, West Lafayette, IN; [2]Eli Lilly & Company, Indianapolis, IN*

TP 071 **Gas-Phase Reactions of Phenyl Radicals and Biradicals with Trinucleotides in an FT-ICR Mass Spectrometry**; Zhicheng Jin; Linan Yang; Nishi Rochell; Hilkka I Kenttamaa; *Purdue University, West Lafayette, IN*

TP 072 **Mixed Silver/Copper Clusters Mediate C-X Bond Activation**; George N. Khairallah; Tom Waters; Richard AJ O'Hair; *BIO21 Institute, The University of Melbourne, Melbourne, Australia*

PEPTIDES: FRAGMENTATION & SEQUENCING II

TP 073 **Influence of a 4-Aminomethylbenzoic Acid Residue on Competitive Fragmentation Pathways during CID of Metal Cationized Peptides**; Sandra Osburn; Erach Talaty; Sila Ochola; Michael J. Van stipdonk; *Witchita State University, Wichita, KS*

TP 074 **Multiple-Stage Tandem MS of Isotope Labeled Leucine Enkephalin**; Travis J. Cooper; Michael J. Van Stipdonk; *Wichita State University, WICHITA, KS*

TP 075 **Photodissociation of Peptides in a Commercial TOF-TOF Instrument with 157 nm Light**; Liangyi Zhang; James P. Reilly; *Indiana university, Bloomington, IN*

TP 076 **The Gas-Phase Neutral Loss of H_3PO_4 from Protonated Phosphopeptides does NOT Predominantly occur via a Charge Remote β-Elimination Mechanism;** Amanda M. Palumbo; Gavin E. Reid; *Michigan State University, East Lansing, MI*

TP 077 **The "Proline-Effect" in Peptide Fragmentation**; Christian Bleiholder[1]; Alex G. Harrison[2]; Sandor Suhai[1]; Bela Paizs[1]; *[1]German Cancer Research Center, Heidelberg, Germany; [2]University of Toronto, Toronto, Canada*

TP 078 **Gold Cation Switching Ion-Ion Reactions: The Role of Sulfur Containing Residues in Fragmentations of Polypeptide Ions**; Brittany D.M. Hodges; Xiaorong Liang; Scott A. McLuckey; *Purdue University, West Lafayette, IN*

TP 079 **MALDI-TOF/RTOF Mass Spectrometry of Peptides at Collision Energies of 20kV and 2kV – Differences in Ion Intensities and/or Fragment Types**; Martina Marchetti[1]; Pavel Rehulka[2]; Josef Chmelik[2]; Emmanuel Raptakis[3]; Günter Allmaier[1]; *[1]Vienna University of Technology, Vienna, Austria; [2]Academy of Sciences of the Czech Republic, Brno, Czech Republic; [3]Shimadzu Biotech-Kratos Analytical, Manchester, UK*

TP 080 **MS/MS Simplification by Ultraviolet Photodissociation of Chromogenically Derivatized Peptides in a Quadrupole Ion Trap;** Jeffrey Wilson; Jennifer Brodbelt; *University of Texas at Austin, Austin, TX*

TP 081 **Sequence Scrambling Pathways of Protonated Peptides Upon CID**; Christian Bleiholder[1]; Travis Cooper[2]; Jerod Groves[2]; Alex B. Young[3]; Sándor Suhai[1]; Michael Van Stipdonk[2]; Alex G. Harrison[3]; Bela Paizs[1]; *[1]German Cancer Research Center, Heidelberg, GERMANY; [2]Wichita State University, Wichita, KS; [3]University of Toronto, Toronto, Canada*

TP 082 **Mechanistic Studies on the Gas-Phase Fragmentation Reactions of Oxidative Peptide Modifications and their Effect on MS/MS Database Search Scores**; Jennifer M. Froelich; Gavin E. Reid; *Michigan State University, East Lansing, MI*

TP 083 **Is a Charge Tag really Fixed?** YI HE; James P. Reilly; *Indiana University, Bloomington, IN*

TP 084 **A Contribution of Ion Mobility Mass Spectrometry to the Investigation of Peptide Fragment Ion Structure**; Isabel Riba[1]; Kevin Giles[2]; Simon J Gaskell[1]; *[1]University of Manchester, Manchester, United Kingdom; [2]Waters Corp., Manchester, UK*

TP 085 **Recognition of Aspartic Acid Isomeric Forms in "Alzheimer Peptide" using AP MALDI**; Aleksey S. Kononikhin[2]; Igor A. Popov[1]; Sergey A. Kozin[3]; Eugene

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Nikolaev[1]; [1]*The Institute for Energy Problems of Chemical Phys, Moscow, Russian Federation;* [2]*Institute for Biohemical Physics, Moscow, Russia;* [3]*Institute for Biomedical Chemistry, Moscow, Russia*

TP 086 **$[c+2H]^+$ Ions and $[z–H]^+$ Ions in the Fragmentations of Radical Cations of Oligopeptides Containing a Tyrosine or Tryptophan Residue**; Yuyong Ke; Andy C. K. Siu; Alan C. Hopkinson ; K.W. Michael Siu; *CRMS/York University, Toronto, Canada*

TP 087 **C-Terminal Fragmentation of Singly-Protonated, Arginine-Containing Peptides: Metastable Loss of C-Terminal Histidine, Lysine, and Arginine Characterized by MALDI-FTMS**; Elizabeth A. Stemmler; Christopher R. Cashman; Patsy S. Dickinson; *Bowdoin College, Brunswick, ME*

TP 088 **Investigation of the Fragmentation of b_3^+ Ions that contain a γ-Amino Acid using Isotope Labeling and Multiple-Stage Tandem MS**; Chawalee Chueachavalit; Erach Talaty; Michael J. Van stipdonk; *Witchita State University, Wichita, KS*

TP 089 **Fragmentation of Protonated RGD: A Combined Modeling and Tandem MS Study**; Benjamin Bythell[1]; Douglas F. Barofsky[1]; Bela Paizs[2]; [1]*Oregon State University, Corvallis, OR;* [2]*German Cancer Research Center, Heidelberg, Germany*

ENVIRONMENTAL ANALAYSIS: WATER

TP 090 **Analysis of Pharmaceuticals in Wastewater Effluents by Liquid Chromatography – Electrospray Ionization-Tandem Mass Spectrometry**; Despina Tsipi; Charalampia Frosyni; Eleni Botitsi; *General Chemical State Laboratory, Athens, Greece*

TP 091 **Analysis of Steroid Estrogens in Water using Liquid Chromatography/Tandem Mass Spectrometry with Chemical Derivatizations**; Ying-Hsuan Lin; Chia-Yang Chen; Gen-Shuh Wang; *National Taiwan University, Taipei City, Taiwan*

TP 092 **Selective Bioaccumulation of PFOS Isomers in the Lake Ontario Food Web**; Jeff M. Small[1]; Gertje Czub[2]; Mehran Alaee[1]; Derek C.G. Muir[1]; Takeo Sakuma[3]; Robert Ellis[3]; Andre Schreiber[3]; [1]*Environment Canada, Burlington, CANADA;* [2]*Department of Applied Environmental Science, Stockholm, Sweden;* [3]*Applied Biosystems-MDS-SCIEX, Concord, Canada*

TP 093 **New Residues of Pesticides in Drinking Water: Determination of Chloridazon Metabolites by LC/MS/MS**; Detlev Schleuder[1]; Axel Besa[1]; Wolfgang Schulz[2]; Wolfram Seitz[2]; Walter Weber[2]; [1]*Applied Biosystems, Darmstadt, Germany;* [2]*Zweckverband Landeswasserversorgung, Langenau, Germany*

TP 094 **Analysis of Water for Pesticides at Low Parts per Trillion (ppt) Levels using Two Dimensional LCMSMS without any Sample Pre-Treatment**; Iain Gibb[1]; [1]*Applied Biosystems, Warrington, United Kingdom;* [2]*ALcontrol, Rotherham, United Kingdom*

TP 095 **Chlorinated vs. Chloraminated Drinking Water: Toxicity-Based Identification of Disinfection By-Products using ESI-MS and ESI-MS/MS**; Susan Richardson[1]; F. Gene Crumley[1]; Francesca Fasano[2]; Michael J. Plewa[3]; Elizabeth D. Wagner[3]; Todd H. Mize[4]; Peggi Angel[4]; Ron Orlando[4]; Leah N. Williamson[4]; Michael G. Bartlett[4]; [1]*US EPA, Athens, GA;* [2]*University of Torino, Torino, Italy;* [3]*University of Illinois, Urbana, IL;* [4]*University of Georgia, Athens, GA*

TP 096 **Simultaneous On-Line Measurement of AOP Degradation Kinetics for Trace Gasoline Components in Aqueous Solutions and Natural Waters by MIMS-MS/MS**; Janet H. L. Nelson; Jacob M. Etzkorn; Michelle C. Lamarche; Duane A. Friesen; Erik T. Krogh; Christopher G. Gill; *AERL, Malaspina University-College, Nanaimo, Canada*

TP 097 **Liquid Chromatography Tandem Mass Spectrometry Characterization of New Drinking Water Disinfection Byproducts**; Yuanyuan Zhao; Jessica Boyd; Steve Hrudey; Feng Qin; Xing-fang Li; *University of Alberta, Edmonton, CANADA*

TP 098 **The Influence of Bromide, Iodide and Copper Ions on the Aquatic Chlorination of 1-methylnaphthalene**; Olga Polyakova; Marina Polyakova; Albert Lebedev; *Moscow State University, Moscow, Russian Federation*

TP 099 **Analysis of Regulated Pesticides in Drinking Water using Large Volume Injections, Online Pre-Concentration, and Fast HPLC**; Jonathan R. Beck; Charles T. Yang; *Thermo Fisher Scientific, San Jose, CA*

TP 100 **Determination of Pharmaceuticals in Environmental Water Samples by Liquid Chromatography Coupled with Electrospray Ionization Tandem Mass Spectrometry**; Cheon-Ho Jo; Seung-Woon Myung; *Kyonggi University, Suwon, South Korea*

TP 101 **Determination and Quantitation of Ten Pesticides in Drinking Water by use of Solid Phase Extraction and ESI-LCMS**; Scott Niemann[1]; Robert Hobson[2]; Dr. James Chapman[3]; [1]*CSS Analytical Company, Inc., Shawnee, KS;* [2]*AM Laboratories Inc., Olathe, KS;* [3]*Rockhurst University, Kansas City, MO*

TP 102 **Resolving Unresolved Complex Mixtures: Offline Coupling of Liquid Chromatography and Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**; Boris Koch[1]; Thorsten Dittmar[2]; Matthias Witt[3]; Gerhard Kattner[1]; [1]*Alfred-Wegener-Institute for Marine Research, Bremerhaven, Germany;* [2]*Florida State University, Dep. of Oceanography, Tallahassee, FL;* [3]*Bruker Daltonik GmbH, Bremen, Germany*

TP 103 **Determination of Ecologically Relevant Pharmaceuticals and Their Selected Metabolites in Effluent and Surface Water using UPLC/MS/MS**; Angela L. Batt; Mitch Kostich; James M. Lazorchak; *U.S. Environmental Protection Agency, Cincinnati, OH*

TP 104 **Are Halogenated Aminoxy Alcohols Disinfection By-Products in Treated Drinking Water? The Need for Accurate Masses in Chemical Ionization Experiments**; Vincent Y. Taguchi[1]; Moschoula A. Trikoupis[1]; Jie Xing[2]; Karl J. Jobst[2]; Johan K. Terlouw[2]; [1]*Ministry of the Environment, Toronto, Canada;* [2]*McMaster University, Hamilton, Canada*

POLYMERS

TP 105 **Qualitative and Quantitative Determination of Tyloxapol in Ophthalmic Formulations using HPLC Rapid Resolution and MS Detection;** Louis-Philippe Labranche; Andrei Nicolau; Alain Carrier; *Sandoz, Boucherville, Canada*

TP 106 **Degradation of Polymeric Ballistic Materials**; Eun Su Park; Kathleen M. Flynn; Gale A. Holmes; Charles M. Guttman; William E. Wallace; *NIST, Gaithersburg, MD*

TP 107 **Analysis of Polymeric Materials using GPC with on-line ESI Mass Spectrometry and Viscometry**; X. Michael Liu[1]; E. Peter Maziarz[2]; William J. Simonsick, Jr. [3]; [1]*Bausch & Lomb, Inc. Global R&D, Rochester, NY 14609;* [2]*Ethicon (a Johnson & Johnson Company), Somerville, NJ;* [3]*DuPont Marsh Laboratory, Philadelphia, PA*

TP 108 **LC-MALDI – Functional Separation of Synthetic Polymers for Differentiating Materials**; William Nichols; Andrew Hoteling; *Eastman Kodak Company, Rochester, NY*

TP 109 **Characterization of Polysorbate 80 in Biotherapeutic Formulations using Mass Spectrometry**; James A. Carroll;

Steven Z. Kan; Matthew R. Farber; Scott I. Allen; *Pfizer, Chesterfield, MO*

TP 110 **MALDI-TOF Analysis of Polymers by using Tailor-Made Fluorinated Azobenzene and Stilbene Matrices**; Arpad Somogyi; Pang Shu; Anne Padias; Doug Hall; Henry Hall, Jr; *University of Arizona, Tucson, AZ*

TP 111 **Analysis of Secondary Organic Aerosol Constituents using Desorption-Electrospray Ionization Tandem Mass Spectrometry;** Marc Fiddler; Paul Shepson; *Purdue University, West Lafayette, IN*

TP 112 **MALDI TOF MS Analysis of Polystyrene in the Mega Dalton Mass Range**; Alexander Aksenov; Mark E Bier; *Carnegie Mellon University, Pittsburgh, PA*

TP 113 **Laser ablation ICP-MS for Surface-Contaminated 300 mm Si Wafer**; Heung Bin Lim[1]; W. K. Ryu[1]; J. S. Lee[2]; J. S. Kim[1]; P. K. Jun[2]; *[1]Dankook University, Seoul, South Korea; [2]Samsung Electroincs, Kiheung, South Korea*

TP 114 **New Approach to Mass Spectrometric Analysis for High Molecular Weight Synthetic Polymers using Ultrasonic Degradations and the Mechanism of Degradation**; Ryuichi Arakawa; Yoshiki Takeda; Hideya Kawasaki; *Kansai University, Osaka, Japan*

TP 115 **Characterization of Linear and Hyperbranched Acrylate Polymers**; Kittisak Chaicharoen; Michael J. Polce; Coleen Pugh; Chrys Wesdemiotis; *The university of Akron, Akron, OH*

TP 116 **Use of Graphite as a Simple MALDI Matrix for Synthetic Polymer Applications**; Philip C. Price; *The Dow Chemical Company, South Charleston, WV*

TP 117 **Determination of Brominated Flame Retardants by Soft Laser Desorption/Ionization-Mass Spectrometry using a Germanium Nanodot Chip as an Ionization Platform**; Hiroaki Sato; Atsushi Nemoto; Atsushi Yamamoto; Masaki Torimura; Hiroaki Tao; *Natl. Inst. Adv. Ind. Sci. & Technol. (AIST), Tsukuba, Japan*

TP 118 **Extracting Information from the Unresolved Envelope Observed in Electrospray MS of Strongly Ionic Synthetic Copolymers and Homopolymer Mixtures**; Huifang Yao; Kelsey Cook; *University of Tennessee-Knoxville, Knoxville, TN*

TP 119 **ESI-TOF MS Investigation of Oligomeric Surface-Protection in Monolayer-Protected Nanoparticles**; Anthony P. Gies; David M. Hercules; Aren E. Gerdon; David E. Cliffel; *Vanderbilt University, Nashville, TN*

TP 120 **Notation for Tandem Mass Spectra of Synthetic Polymers: Polyethers**; Tony Jackson; *ICI plc, Redcar, United Kingdom*

TP 121

TP 122 **High Temperature MALDI: Mass Spectrometry of Polyethylene as a Function of Sample Temperture**; William E. Wallace; William R. Blair; *National Institute of Standards & Technology, Gaithersburg, MD*

TP 123 **Mass spectrometry of Nonpolar Polymers by Desorption Chemical Ionization method**; Shuji KAGAWA; Masatomi Ozawa; *Mitsubishi Chemical Group, Science and Technology, Yokohama, Japan*

TP 124 **Challenges in MALDI MS Analysis of Polystyrene Stars, Copolymers, and Sensitive Functionalized Polymers**; Michael J. Polce; Camila Garces; Jonathan Janoski; Manuela Ocampo; Michael Olechnowicz; Roderic P. Quirk; Chrys Wesdemiotis; *The University of Akron, Akron, OH*

TP 125 **Characterization of Polypropylene Homopolymers by Mild Pyrolysis and MALDI-TOF-Mass Spectrometry**; David Dabney; Michael Polce; Chrys Wesdemiotis; *University of Akron, Akron, OH*

TP 126 **MALDI-TOF/TOF CID Studies of Styrenic Polymer Fragmentation Reactions**; David M. Hercules; Anthony P. Gies; Matthew J. Vergne; Rebecca L. Orndorff; *Vanderbilt University, Nashville, TN*

TP 127 **Quantitative Analysis of Tensoactives in Synthetic Latex Samples by Means of High-Resolution Mass Spectrometry**; Jose-Luis Gallegos-Perez[2]; Cristina Fonseca-Corona[1]; Luz-Elena Vera-Avila[1]; *[1]National Autonomous University of Mexico, Mexico city, Mexico; [2]National Institute of Genomic Medicine, Mexico, Mexico city, Mexico*

TP 128 **Profiling Impurities in a Taxol Formulation: Application of a Mass-Dependent Mass Defect Filter to Remove polymeric Excipient Interferences**; Haiying Zhang; Kenneth Ray; *Bristol-Myers Squibb Pharm Res, Princeton, NJ*

TP 129 **Challenges in the Mass Spectrometry Analysis of Poly(dichlorophosphazene)s**; Alyison M. Leigh; Claire A. Tessier; Chrys Wesdemiotis; *The University of Akron, Akron, OH*

TP 130 **Copolymer Analysis using MALDI-TOF Mass Spectrometry and Statistics**; Mark Arnould; *Xerox, Webster, NY*

TP 131 **CID Fragmentation of Cyclic Caprolactam Adduct Ions Depending on Ionisation Mode and Collision Energy**; Martin Resch[1]; Karsten Rode[2]; Joseph Fox[3]; Harald Pasch[2]; *[1]Shimadzu Europa GmbH, Duisburg, Germany; [2]German Institute for Polymers, Darmstadt, Germany; [3]Shimadzu Scientific Instruments Inc., Columbia, MD*

LC/MS

TP 132 **Indirect Identification of Haemoglobin-Based Oxygen Carriers in Equine Plasma using Liquid Chromatography/Tandem Mass Spectrometry**; Colton H F Wong[1]; Gary N W Leung[1]; Terence S M Wan[1]; Shawn Stanley[2]; *[1]The Hong Kong Jockey Club, Hong Kong, Hong Kong; [2]Singapore Turf Club, Singapore, Singapore*

TP 133 **Development and Validation of a Quantitative LC-MS/MS Method for Ten Perfluorinated Compounds in Human Breast Milk**; Syrago Styliani E Petropoulou[1]; Andrew Lindstrom[2]; Mark Strynar[2]; Laurence Helfant[3]; Xibiao Ye[2]; Shoji Nakayama[1]; *[1]Oak Ridge Institute for Science and Education, Oak Ridge, TN; [2]HEASD/NERL/MDAB, US EPA, Research Triangle Park, NC 27711; [3]Senior Environmental Employment Program, National, Washington, DC*

TP 134 **Effectiveness of Surface Activated Chemical Ionization Mass Spectrometry in Trace Analysis of Street Drugs in Non Pre-Purified Hair Samples**; Simone Cristoni[1]; Luigi Rossi Bernardi[2]; *[1]ISB, Italy, Italy; [2]Multimedica Laboratories, Milan, Italy*

TP 135 **High Throughput Nano-LC/ESI-MS with Microfluidic Gradient Generation**; Hongfeng Yin; Reid A. Brennen; Kevin P Killeen; *Agilent Technologies, Santa Clara, CA*

TP 136 **Novel Uses of Ion Chromatography Suppressors Prior to ESI-MS**; Rosanne Slingsby; *Dionex corp, Sunnyvale, CA*

TP 137 **Development of an LC-MS^n Method for the Detection of Ziconotide in Horse Serum**; Jhoana Mendoza[1]; Keith D. Zientek[2]; Patrick T. Russell[3]; Richard A. Sams[3]; John R. Eyler[1]; Laszlo Prokai[4]; *[1]University of Florida, Gainesville, FL; [2]BASi Northwest Laboratory Services, McMinnville, OR; [3]UF College of Vet. Med. Racing Laboratory, Gainesville, FL; [4]University of North Texas Health Science Center, Fort Worth, TX*

TP 138 **Analysis of Primary and Secondary Organic Aerosols by LC-MS/MS;** James C Reynolds; Lucy J Carpenter; Alastair C Lewis; *University of York, York, UNITED KINGDOM*

TP 139 **Simultaneous LC-MS/MS Determination of Sildenafil and Related Analogues Added Illegally to Herbal Products Intended for the Treatment of Erectile Dysfunction**; Martin Dušek[1]; Miloslav Šanda[2]; Petr Cuhra[1];

TUESDAY POSTERS

Sona Baršová[1]; *[1]Czech Agriculture and Food Inspection Authority, Prague, Czech Republic; [2]Institute of Organic Chemistry and Biochemistry, Prague, Czech Republic*

TP 140 **A New Mass Spectrometric Method for the Assay of N^8-Acetylspermidine Deacetylase**; Yongyuan Zhao; James W. Blankenship; JianHua Ren; O. David Sparkman; Patrick R. Jones; *Univerisity of the Pacific, Stockton, CA*

TP 141 **Detection of Stanozolol in Equine Biological Matrix using an Alternate Separation Technique with FAIMS Tandem MS-MS;** Benjamin C Moeller; Scott D Stanley; Roland P Carlson; Daniel McKemie; *University of California at Davis, Davis, CA*

TP 142 **A Sensitive Enantioselective Method for Determination of Reboxetine Isomers in Plasma & Tissue using Automated Sample Preparation with LC\MS\MS Analysis**; Joe Palandra; Desiree Watson; Felicia Kpakima; Ayman El-Kattan; Lucinda Cohen; *Pfizer, Ann Arbor, MI*

TP 143 **Analysis of Beer using a High Speed U-HPLC Coupled to a Hybrid Linear Ion Trap Mass Spectrometer;** Gary Woffendin; Katerina Klagkou; Michaela Scigelova; *Thermo Fisher Scientific, Hemel Hempstead, United Kingdom*

TP 144 **Retention Time Conversion for Cross-Platform Transfer of HPLC-MS/MS Proteomics Data**; Irina A. Tarasova[1]; Christophe D. Masselon[3]; Marina L. Pridatchenko[1]; Sylvie Kieffer-Jaquinod[3]; Vilem Guryca[3]; Jerome Garin[3]; Alexander V. Gorshkov[2]; Victor V. Evreinov[2]; Mikhail V. Gorshkov[1]; *[1]Institute of Energy Problems of Chemical Physics, Moscow, Russia; [2]Institute of Chemical Physics, Moscow, Russia; [3]CEA Grenoble, EDyP laboratory, INSERM U 880, Grenoble, France*

TP 145 **Drugs as New Environmental Contaminants: Photocatalytic Degradation Process as a Tool to Study Biological/Environmental Fate of Salbutamol and Atenolol**; Claudio Medana[1]; Paola Calza[1]; Enrico Davoli[2]; Claudio Baiocchi[1]; *[1]Universita' degli Studi di Torino, Torino, Italy; [2]Istituto Mario Negri, Milano, Italy*

TP 146 **Rapid identification of Soil Degradates using Accurate Mass, MS/MS Data, and Isotopic Pattern Recognition;** Sara J. Linder; Jesse L. Balcer; Robin N. Yoder; Pete L. Johnson; Mark Krieger; Jeffrey R. Gilbert; *Dow AgroSciences, Indianapolis, IN*

BIOINFORMATICS

TP 147 **Automated MS Data Processing Pipeline in the Testis Proteome Pilot Project**; Regis Lavigne[1]; Djibril Ousmanou[1]; Morgane Couvet[1]; Nathalie Guitton[1]; Jorg Glandorf[2]; Herbert Thiele[2]; Charles G. Pineau[1]; *[1]Inserm U625, Proteomics Platform OUEST-genopole, Rennes, France; [2]Bruker Daltonics, GmbH, Bremen, Germany*

TP 148 **ProteomeWorkflow : Workflow Tool for Building Proteomics Workflows**; David Lentz; Christopher J Mason; Rudi Chiarito; H. Robert Bergen III; *Mayo Clinic, Rochester, MN*

TP 149 **PRIME: Proteome Research Information Management Environment For High-Throughput Proteomics Laboratories**; Panagiotis G. Papoulias[1]; David H. Lentz[2]; Philip C. Andrews[1]; *[1]National Resource For Proteomics And Pathways, Ann Arbor , MI; [2]MayoClinic, Rochester, MN*

TP 150 **A Comprehensive Data Processing Workflow for Topdown Proteomics**; Frank Li; Peter Baker; Feixia Chu; Robert Chalkley; Shenheng Guan; Al Burlingame; *University of California, San Francisco, CA*

TP 151 **Assessment and Control of False Positive Rates in Large-Scale Proteomic Studies using Randomized Protein Sequence Databases**; Guanghui Wang; Wells W. Wu; Rong-Fong Shen; *NHLBI, NIH, Bethesda, MD*

TP 152 **Recent Advances in Performance and Search Engine Compatibility in the Trans-Proteomic Pipeline: Combining Phenyx and the Proteomic Pipeline for Quantitation;** Bryan J. Prazen; Brian S. Pratt; Erik J. Nilsson; *Insilicos, Seattle, WA*

TP 153 **Combining Spectral Library Searching with Sequence Searching of MS/MS Peptide Spectra**; Paul Rudnick[1]; Stephen H. Bryant[2]; Lewis Y. Geer[2]; Lisa E. Kilpatrick[1]; Jeffrey A. Kowalak[3]; Sanford P. Markey[3]; Yuri Mirokin[1]; Stephen E. Stein[1]; Ming Xu[2]; *[1]National Institute of Standards and Technology, Gaithersburg, MD; [2]National Center for Biotechnology Information, Bethesda, MD; [3]National Institute of Mental Health, Bethesda, MD*

TP 154 **BUDSS: A Software Shell for Automated MS Data Processing and Management**; Yang Su[1]; Sequin Huang[2]; Hua Huang[3]; David H. Perlman[1]; Catherine E. Costello[1]; Mark E. McComb[1]; *[1]Boston University, Boston, MA; [2]Waters Corp, Milford, MA; [3]Allergan Inc, Irvine, CA*

TP 155 **ProtQuant Suite: A Software Tool for Protein Quantification in High-Throughput Proteomics**; Milan Madera[1]; Yehia Mechref[2]; Benjamin Mann[1]; Quanhu Sheng[3]; Haixu Tang[3]; Milos V. Novotny[1]; *[1]Indiana University, Bloomington, IN; [2]National Center for Glycomics and Glycoproteomics, Bloomington, IN; [3]School of Informatics, Bloomington, IN*

TP 156 **Gene Annotation in Toxoplasma gondii**; Dmitrij Rykunov; Carlos Madrid; Edward Nieves; Fa-Yun Che; Hui Xiao; Kami Kim; Louis Weiss; Ruth Hogue Angeletti; Andras Fiser; *Albert Einstein College of Medicine, Bronx, NY*

TP 157 **MassSieve: A New Visualization Tool for Mass Spectrometry-Based Proteomics**; Douglas J. Slotta; Melinda A. McFarland; A. James Makusky; Sanford P. Markey; *NIMH/NIH, Bethesda, MD*

TP 158 **Information Architecture for a High Throughput Proteomics Laboratory**; Donald J. Johann[2]; Josip Blonder[1]; Timothy D. Veenstra[1]; Ming Zhou[1]; *[1]SAIC-Frederick, Frederick, MD; [2]National Cancer Institute, Bethesda, MD*

TP 159 **ISPIDER Central: A Novel Bioinformatic Infrastructure for Accessing, Comparing and Adding Value to Proteomic and Mass Spectrometric Data;** Jennifer Siepen[1]; Khalid Belhajjame[1]; Lucas Zamboulis[2]; Nigel Martin[2]; Alex Poulovassilis[2]; Julian Selley[1]; Norman Paton[1]; Suzanne Embury[1]; Simon Hubbard[1]; *[1]University of Manchester, Manchester, United Kingdom; [2]Brikbeck College, London, UK*

TP 160 **An Integrated System for Proteomic Mass Spectrometric Data Management and Analyses**; Sung Kyu Park; Tao Xu; Daniel Cociorva; Bingwen Lu; Claire Delahunty; Lujian Liao; Cristian Ruse; Johannes Hewel; John R. Yates III; *Scripps Research Institute, La Jolla, CA*

TP 161 **Enhancing the OMSSA Browser: Embedding the OMSSA MS/MS Search Engine and Protein Level Data Processing for Bottom-Up Proteomics**; Ming Xu; Lewis Y. Geer; Stephen H. Bryant; *NCBI/NLM/NIH, bethesda, MD*

TP 162 **Building Peptide Mass Spectral Libraries from Bacterial Proteomes Analyzed by 2D-LC-MS/MS**; Lisa E. Kilpatrick[1]; Nikole Kimes[2]; Pamela J. Morris[2]; Jeri Roth[1]; Paul Rudnick[1]; Xiaoyu Yang[1]; Stephen E. Stein[1]; *[1]National Institute of Standards and Technology, Gaithersburg, MD; [2]Medical University of South Carolina, Charleston, SC*

TP 163 **Data Analysis Strategy for Comprehensive and Confident Coverage of the Human Salivary Proteome**; Daniel Cociorva; Tao Xu; Sung Kyu Park; Bingwen Lu; Lujian Liao; Claire Delahunty; John R Yates; *The Scripps Research Institute, La Jolla, CA*

TP 164 **Tranche Open and Secure Proteomics Data Sharing and Google-like Interface for Searching Proteomics Data**;

TUESDAY POSTERS

Philip C. Andrews; Jayson A. Falkner; *University of Michigan, Ann Arbor, MI*

TP 165 **High-Throughput Data Management of Shotgun IEF Results by ProteinScape**; Alexis Chauvet[1]; Pierre-Alain Binz[2]; Ali R. Vaezzadeh[1]; Catherine G. Zimmermann-Ivol[1]; Patricia M. Palagi[2]; Ron D. Appel[2]; Herbert Thiele[5]; Denis Hochstrasser[1]; *[1]BPRG, University Hospital, Geneva, Switzerland; [2]Proteome Informatics G., Swiss Inst. Bioinform., Geneva, Switzerland; [3]Geneva Bioinformatics (GeneBio) S.A., Geneva, Switzerland; [4]Computer Science Department, Geneva University, Geneva, Switzerland; [5]Bruker Daltonics GMBH, Bremen, Deutschland*

TP 166 **A Software Suite to Expedite the Study of Cell Signaling Pathway: Automated Acquisition, Organization and Annotation**; Kebing Yu; *Brown University, Providence, RI*

TP 167 **Redundancy of Protein Databases: Problems and Solutions;** Morten Bern; Ole Vorm; Alexandre Podtelejnikov; *Proxeon A/S, Odense, Denmark*

TP 168 **Creation and Optimization of Mass Spectrometry Diagnostic Workflows using a Visual Programming Interface**; Maciek Sasinowski[1]; Krista Miller[1]; Jason Miller[1]; Dough Hawkins[1]; Nick Glover[1]; Heather Sasinowska[1]; Dariya Malyarenko[2]; Maureen Tracy[2]; Liang Wei[2]; Haijian Chen[2]; Christine Bunai[2]; Karl Kuschner[2]; John Semmes[3]; Richard Drake[3]; Eugene Tracy[2]; Dennis Manos[2]; William Cooke[2]; *[1]INCOGEN, Inc, Williamsburg, VA; [2]College of William and Mary, Williamsburg, Virginia; [3]Eastern Virginia Medical School, Norfolk, Virginia*

TP 169 **Corra: Computational Tools for Discovery and Targeted Mass Spectrometry: Application to Candidate Biomarker Identification for Human Type 2 Diabetes**; Mi-youn Brusniak[1]; Simon Letarte[1]; Olga Vitek[2]; David Campbell[1]; Lukas Muller[3]; Vagisha Sharma[1]; James Eddes[1]; Julian Watts[1]; Ruedi Aebersold[1]; *[1]Institute for Systems Biology, Seattle, WA; [2]Statistics and Computer Science, Purdue University, West Lafayette, IN; [3]Institute of Molecular Systems Biology, Zurich, Switzerland*

TP 170 **Bioinformatical Data Mining in Shotgun Proteomics;** Morten Bern; Hans Jespersen; Alexandre Podtelejnikov; Peter Venø; Martin Damsbo; Soren Larsen; Brian Ramsgaard; Erik Nielsen; Jacob Kristensen; Kenneth Budin; John Chakel; Ole Vorm; *Proxeon A/S, Odense, Denmark*

TP 171 **Interactive Visualization of 'Omics Molecular Expression Networks**; Mingwu Zhang; Michael? Kane; David Salt; Sunil Prabhakar? Charles Buck; Fred Regnier; Xiang Zhang; *Purdue University, West Lafayette, IN*

TP 172 **Evaluation of Different Strategies for Constructing Decoy Sequence Databases**; Roger Moore; Mary K. Young; Terry D. Lee; *Beckman Research/City of Hope, Duarte, CA*

TP 173 **Procedures and Guidelines for the Validation of MS Based Database Search Protocols for Unequivocal Protein Identification;** Jackie Mosely[1]; Gavin O'Connor[2]; Simon Cowen[2]; Sarah Williams[1]; *[1]Durham University, Durham, United Kingdom; [2]LGC Limited, Teddington, United Kingdom*

TP 174 **A Reference Collection of MS/MS Spectra of Bioactive Peptides**; Xiaoyu Yang; Pedatsur Neta; Quan-long Pu; Lisa Kilpatrick; Jeri Roth; Stephen E. Stein; *NIST, Gaithersburg, MD*

TP 175 **Visualization of Peptide-Protein Relationship Networks in Cytoscape**; Luis Mendoza[1]; Ruedi Aebersold[2]; *[1]Institute For Systems Biology, Seattle, WA; [2]Institute for Molecular Systems Biology,ETH Zurich, Zurich, Switzerland*

TP 176 **xcms: A dynamic Metabolomic Proteomic Conduit**; Paul H Benton[1]; Colin Smith[2]; Sunia Trauger[1]; Gary Siuzdak[1]; *[1]Scripps, La Jolla, CA; [2]UCSF, San Francisco, CA*

TP 177 **Redundant Data Storage and Data Processing Computer Hardware Solution for Mass Spectrometry Laboratories on a Budget**; James West; Weiwei Tong; Yang Su; Catherine Costello; Mark McComb; *Boston University, Boston, MA*

LIPIDS: STRUCTURAL ANALYSIS

TP 178 **Reducing Fragmentation Observed in the MALDI-TOF MS Analysis of Triacylglycerols in Vegetable Oils**; Jack Lay; Jennifer Gidden; Rohana Liyanage; Bill Durham; *Univeristy of Arkansas, Fayetteville, AR*

TP 179 **Software Framework for Versatile Interpretation of Cross-Platform Lipidomics Datasets**; Dominik Schwudke; Ronny Herzog; Vitaly Matiash; Teymuras Kurzchalia; Andrej Shevchenko; *Max Planck Institute CBG, Dresden, Germany*

TP 180 **Phospholipidomics: Characterisation of Phosphatidylethanolamines in Lipid Extracts by Hyphenated Techniques;** Jan Willmann[1]; Manfred Spraul[2]; Herbert Thiele[3]; Dieter Leibfritz[1]; *[1]University of Bremen, Bremen, Germany; [2]Bruker BioSpin GmbH, Rheinstetten/Karlsruhe, Germany; [3]Bruker Daltonik GmbH, Bremen, Germany*

TP 181 **Shotgun Sphingolipidomics: ESI/MS Analysis and Quantitation of Cellular Sphingolipids from Crude Extracts of Biological Samples after Treatment with Lithium Methoxide**; Xianlin Han; Xuntian Jiang; *Washington University School of Medicine, St. Louis, MO*

TP 182 **Data Independent Direct Infusion Tandem Mass Spectrometry (DI2MS2), an Automated Approach to Monitor Quantitative and Qualitative Differences of the Metabolome**; Phillip Sanders; Jian Wang; Jeffrey Dage; Ming-Shang Kuo; *Eli Lilly, Indianapolis, IN*

TP 183 **Accurate and Global Analysis of Phospholipids and Glycerolipids by Orbitrap Mass Spectrometry Combination with High Separation Liquid Chromatography**; Ryo Taguchi; Toshiaki Houjou; Kazutaka Ikeda; Takao Shimizu; *The University of Tokyo, Tokyo, 113-0033, Japan*

TP 184 **Quantification of the Potential Biomarkers Platelet-Activating Factors (PAFs) and Lysogpcs by Reversed Phase HPLC-Tandem Mass Spectrometry**; Roland Geyer[1]; Uta Ceglarek[2]; Axel Besa[3]; *[1]Applera Europe B.V., 6343 Rotkreuz, Switzerland; [2]LM, University Hospital Leipzig, 04103 Leipzig, Germany; [3]Applied Biosystems, 64293 Darmstadt, Germany*

TP 185 **Relative Quantitation of Glycerophosphoethanolamine Lipids using Isotope-Tagged (iTRAQ and mTRAQ) Derivatives**; Karin A. Zemski-Berry[1]; John M. Hevko[2]; Robert C. Murphy[1]; *[1]UCHSC/UCH at Fitzsimons, Aurora, CO; [2]Applied Biosystems, Foster City, CA*

TP 186 **Characterization of Total and Class-Separated Lipid Extracts**; Jane Zhao[1]; Alina Dindyal-Popescu[1]; Eva Duchoslav[1]; Kim Ekroos[2]; Gun-Britt Forsberg[2]; *[1]Applied Biosystems/MDS Sciex, Concord, Canada; [2]AstraZeneca R&D, Molndal, Sweden*

TP 187 **Application of 2D-HPLC/ESI/MS-MS for the Comprehensive Analysis of Complex Mixtures of Triglycerides**; Dong Zheng[1]; Lan Yang[2]; Jason Evans[1]; *[1]Umass Boston, Boston, MA; [2]Altus Pharmaceuticals Inc., Cambridge, Ma*

TP 188 **Chemical Activation UsingTransition Metal Ions For Promoting Specific Dissociations of Fatty Acids Under Low Collision Energy Conditions and IRMPD;** Carlos Afonso; Ying Xu; Françoise Fournier; Jean-Claude Tabet; *Université Paris 6, Paris, FRANCE*

TP 189 ***In vivo* Measurements of Endogenous and Isotopically Labeled Phospholipids by Tandem Mass Spectrometry**;

TUESDAY POSTERS

Sebastien Gagne; Nathalie Coulombe; Nathalie Methot; Kevin Bateman; *Merck Frosst Canada & Co, Kirkland, Canada*

TP 190 **Positional Analysis of Trigylcerides using Collisional-Induced Decomposition in an Ion Trap: Defining the Calibration Plots of ABA/AAB-Type Positional Isomer Systems**; Robert Gakwaya; Melissa Liriano; Elizabeth, J Collins; Jason Evans; *University of Massachusetts Boston, Boston, MA*

CARBOHYDRATES & OLIGOSACCHARIDES II

TP 191 **Characterization of Oligosaccharides using Infrared Multiphoton Dissociation and an IR-Active Boronic Acid Derivatization Reagent**; Michael Pikulski; Lisa Vasicek; Jennifer Brodbelt; *The University of Texas, Austin, TX*

TP 192 **Differentiation of Li-Coordinated Disaccharide Isomers by Wavelength-Dependent CO_2 Laser Photo-Fragmentation and Fourier Transform Ion Cyclotron Mass Spectrometry**; Sarah Stefan; John Eyler; *University of Florida, Gainesville, FL*

TP 193 **Isomeric Differentiation of N-Glycan Structures by Laser-Induced Photofragmentation inside an Ion-Trap Mass Spectrometer**; Arugadoss Devakumar; Yahia Mechref; Pilsoo Kang; Milos V Novotny; James P Reilly; *Indiana University, Bloomington, IN*

TP 194 **Electron Detachment Dissociation of Neutral and Sialylated Oligosaccharides**; Julie T. Adamson; Kristina Håkansson; *University of Michigan, Ann Arbor, MI*

TP 195 **Characterization of Post-Translational Modifications Including Carbohydrates of a Monoclonal Antibody via HPAEC-PAD, NR-LC-MS/MS, Limited Proteolysis and Peptide Mapping**; Melissa Zolodz; John C. Le; Scott Buckel; *Xencor, Monrovia, CA*

TP 196 **Electron Capture/Detachment Dissociation and Collisionally Activated Dissociation Provide Complementary Structural Information of Permethylated and Native Oligosaccharides**; Cheng Zhao; Bo Xie; Jason Cournoyer; Shiu-Yung Chan; Joseph Zaia; Catherine Costello; Peter O'Connor; *Boston University, Boston, MA*

TP 197 **Ionic Liquid Matrix for MALDI-TOF/TOF-MS Analysis of Keratan Sulfate Oligosaccharides**; Yuntao Zhang[1]; Abigail H Conrad[1]; Yutaka Kariya[2]; Kiyoshi Suzuki[2]; Gary W Conrad[1]; *[1]Kansas State University, Manhattan, KS; [2]Seikagaku Corporation, Higashiyamato-shi, Japan*

TP 198 **Atmospheric Pressure Photoionization Mass Spectrometry of Permethylated Oligosaccharides**; Aïcha Bagag[1]; Alexandre Giuliani[2]; Olivier Laprévote[1]; *[1]Laboratoire de Spectrométrie de masse, ICSN-CNRS, 91198 Gif sur Yvette , FR; [2]Cepia, INRA, 44316 Nantes cedex 3, FR*

TP 199 **Differentiation of Linkage Isomers and Anomers of Disaccharides by Anion Attachment with Post-Source Decay in MALDI-rTOF**; Bing Guan; Richard B. Cole; *University of New Orleans, New Orleans, LA*

TP 200 **Differential EI Ion Fragmentation Pathways for Peracetylated C-Glycoside Ketals**; Anthony Adeuya[1]; Frank Momany[2]; Neil P. Price[1]; *[1]USDA-ARS-NCAUR,Bioproducts & Biocatalysis Research, Peoria, IL; [2]USDA-ARS-NCAUR, Plant Polymer Research, Peoria, IL*

TP 201 **High Performance Structural Analyses of Glycopeptides by Low-Energy CID using MALDI-QIT-TOF Mass Spectrometer**; Sadanori Sekiya; Koichi Tanaka; *Shimadzu Corporation, Kyoto, Japan*

TP 202 **Sensitive Detection of Oligosaccharides by LDI/TOF using Silica Modified Stainless-Steel Plate**; Joeng Heon Lee[2]; Mi Young Ha[2]; Yangsun Kim[1]; *[1]Hudson surface Technology, Newark, NJ; [2]ASTA, Suwon, Korea*

TP 203 **A Computational Approach to Glycan Isoform Characterization using MALDI-TOF-TOF Mass Spectrometry**; Quanhu Sheng[1]; Yehia Mechref[1]; Pilsoo Kang[1]; Milos V Novotny[1]; Yixue Li[2]; Rong Zeng[2]; Haixu Tang[1]; *[1]Indiana University, Bloomington, IN; [2]Shanghai Institutes for Biological Sciences, Shanghai, China*

TP 204 **Analysis of Oligosaccharides by Capillary Anion-Exchange Chromatography using Pulsed Amperometric Detection and On-Line ESI Ion-Trap Mass Spectrometry**; C. Bruggink[1]; C.A.M. Koeleman[2]; V. Barreto[3]; Y. Lui[3]; C. Pohl[3]; A. Ingendoh[4]; M. Wuhrer[2]; C.H. Hokke[2]; A.M. Deelder[2]; *[1]Dionex Benelux, Amsterdam, The Netherlands; [2]Leiden University Medical Center, Leiden, The Netherkands; [3]Dionex Corp., Sunnyvale, CA; [4]Bruker Daltonics, Bremen, Germany*

TP 205 **Theoretical Study on Fragmentation Mechanisms of Positive and Negative Ions of Oligosaccharides**; Takae Takeuchi[1]; Ayami Nakao[1]; Michiko Tajiri[3]; Yoshinao Wada[4]; *[1]Nara Women's University, Nara, Japan; [2]AIST, Ikeda, Japan; [3]JST, Izumi, Japan; [4]Osaka MCHRI, Izumi, Japan*

TP 206 **Structural Analysis of Underivatized Sulfated Glycans using IR-MALDI-QIT-TOF-MS**; Katsutoshi Takahashi[1]; Toshikazu Minamisawa[2]; *[1]AIST, Tokyo, Japan; [2]Seikagaku Corporation, Higashiyamato, Japan*

TP 207 **Collision Induced Dissociation and Higher Energy C-Trap Dissociation of Oligosaccharides on a Hybrid Linear Ion Trap – Orbitrap Mass Analyzer**; Gottfried Pohlentz[1]; Kerstin Strupat[2]; Thomas Moehring[2]; Jasna Peter-Katalinic[1]; *[1]Univ. of Muenster, Muenster, Germany; [2]Thermo Fisher Scientific, Bremen, Germany*

TP 208 **"One-Pot" Methylation in Glycomics Application: Esterification of Sialic Acids and Permanent Charge Construction**; Xin Liu[1]; Xianyu Li[1]; Kenneth Chan[1]; Wei Zou[1]; Patrick Pribil[2]; Xing-Fang Li[3]; Michael B. Sawyer[3]; Jianjun Li[1]; *[1]National Research Council, Ottawa, Canada; [2]Applied Biosystems/MDS Sciex, Concord, Canada; [3]University of Alberta, Edmonton, Canada*

TP 209 **DHB/Aniline MALDI Matrix for Improved Detection and On-Target Derivatization of Glycans: Towards Automated Identification and Quantitative Analysis**; Sergei I. Snovida; Justin M. Rak-Banville; Hélène Perreault; *University of Manitoba, Winnipeg, , Canada*

TP 210 **Electron Detachment Dissociation Fourier Transform Mass Spectrometry Of Glycosaminoglycan Oligosaccharides**; Jeremy J. Wolff[1]; Tatiana Larramore[2]; Robert J. Linhardt[2]; I. Jonathan Amster[1]; *[1]University of Georgia, Athens, GA; [2]Rensselaer Polytechnic Institute, Troy, NY*

TP 211 **MALDI for Large Polysaccharides Detection**; Nien-Yeen Hsu; *Genomics Research Center, Academia Sinica, Taipei, Taiwan*

METABOLITES (ENDOGENOUS): TARGETED ANALYSIS

TP 212 **Method Development of Capillary Electrophoresis-Electrospray Ionization-Mass Spectrometry for Metabolic Comparison of Wild Type and Ethanol Adapted Strains of Clostridium Thermocellum**; Anup P. Thakur; Herbert J. Strobel; Barbara L. Knutson; Sue E. Nokes; Bert C. Lynn; *University of Kentucky, Lexington, KY*

TP 213 **HPLC/Time-of-Flight Mass Spectrometry Based Metabolite Profiling of Betaines and Dimethylsulfoniopropionate in Corals**; Chao Li; A. Daniel Jones; *Michigan State University, East Lansing, MI*

TP 214 **Comparative Metabolite Profiling of Carboxylic Acids in Rat Urine by CE-ESI MS/MS through Positively Pre-Charged and 2H-Coded Derivatization**; Wen-Chu Yang;

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Fred E. Regnier; *Department of Chemistry, Purdue University, West Lafayette, IN*

TP 215 **LC/TOF MS with Multiplexed CID for Profiling Acylsugar and other Specialized Metabolites in Solanum Trichomes**; Feng Shi; Jason Kuo; McClosky Daniel; A. Daniel Jones; *Michigan State University, East Lansing, MI*

TP 216 **UPLC and Monolithic HPLC/ESI-MS and MS/MS Determination of Carnitine and Acylcarnitines**; Soledad Cerutti; Timothy Garret; Peggy R. Borum; Jodie V. Johnson; Richard A. Yost; David H. Powell; *University of Florida, Gainesville,*

TP 217 **Profiling of Sugar Phosphate Metabolism in Arabidopsis using GC-MS with Pseudo-MS3**; David Mccaskill; Mendy L. Foster; Jon C. Mitchell; *Dow AgroSciences, Indianapolis, IN*

TP 218 **Comparative Metabolism Study between Calcitriol and 3epi-calcitriol using HPLC and GC/MS: New Evidence for the Metabolic Stability of 3epi-calcitriol**; Caroline Ceailles[1]; Paul Vouros[1]; Alex Brown[2]; Seiichi Ishizuka[3]; Guochun Wang[4]; Matthew Robinson[4]; G. Satyanarayana Reddy[4]; *[1]Northeastern University, Boston, MA; [2]Washington University School of Medecine, St. Louis, MO; [3]Teijin Institute for Bio-Medical Research, Tokyo, Japan; [4]Epimer LLC, Providence, RI*

TP 219 **Quantitative Analysis of Acylcarnitines in Plasma, Serum and Urine by Liquid Chromatography—Tandem Mass Spectrometry**; John Hanley Jr; Sonia Gill; Halani Meneses; Alex Salazar; Ann Trinh; *Lipomics Technologies, West Sacramento, CA*

TP 220 **Quantification of Target Phosphatidylethanolamine and Monogalactosyldiacylglycerol Plant Lipids using Flow Injection Analysis and Selected Reaction Monitoring**; Michael C. Stagliano; Terry Ball; A. Daniel Jones; *Michigan State University, East Lansing, MI*

TP 221 **Analysis of Urinary Nucleosides in Cancer Patients under Therapeutic Acupuncture Treatment by LC-MS**; Byoung Joon Ko[1]; Kyung-Rae Kim[2]; Jennifer S. Brodbelt[1]; *[1]UT-Austin, Austin, TX; [2]Sungkyunkwan University, Suwon, South Korea*

TP 222 **Simultaneous Measurement of Rat Serum Metabolites using Nanoelectrospray LC-MS and Coulometric Detection**; Susan Schiavo[1]; Wayne Matson[2]; Bruce S. Kristal[3]; Paul Vouros[1]; *[1]Northeastern University, Boston, MA; [2]Bedford VA, Bedford, MA; [3]Harvard School of Public Health, Boston, MA*

TP 223 **Discovery of Dopamine Glucuronide in Brain Microdialysis Samples using Liquid Chromatography Tandem Mass Spectrometry**; Päivi SUSANNA Uutela; Laura Karhu; Petteri Piepponen; Raimo A. Ketola; Risto Kostiainen; *University of Helsinki, Helsinki, Finland*

DRUG METABOLISM: HIGH THROUGHPUT

TP 224 **High Throughput Metabolic Stability Screening with MALDI Triple Quadrupole Mass Spectrometry**; Tim Hoffman; Feng Zhong; Hesham Ghobarah; George Scott; Daniel Lebre; Jay Corr; *Applied Biosystems/MDS Sciex, Concord, Canada*

TP 225 **Reducing Analysis Times for High Throughput Metabolite Identification using High Flow LC/MS/MS**; Elliott Jones[1]; Robert Cambell[2]; Tania A Sasaki[1]; *[1]Applied Biosystems, Foster City, CA; [2]Theravance, South San Francisco, CA*

TP 226 **Speed Up of the Identification of the Metabolites of Citalopram using LC/MS/MS and *in silico* Prediction;** Sian Ives[1]; Klaus Gjervig-Jensen[2]; Nicole McSweeney[1]; *[1]Lhasa Limited, Leeds, United Kingdom; [2]Lundbeck A/S, Copenhagen, Denmark*

TP 227 **Evaluation of MALDI Triple Quadrupole Mass Spectrometry for High Throughput Drug-Drug Interaction Screening**; Feng Zhong; George Scott; Daniel Labre; Hesham Ghobarah; Jay Corr; *Applied Biosystems/MDS Sciex, Concord, Canada*

TP 228 **Optimisation of a Cytochrome P450 Inhibition Assay with Cassette Incubation, LC-MS/MS Analysis and Automated Data Processing**; Ellen Tasker[1]; Lynn Abernethy[1]; Peter Littlewood[1]; Paul Scullion[1]; Patrick Currie[1]; Paul Harradine[1]; Amy Davies[2]; Ed Sprake[2]; *[1]Organon Biosciences, Lanarkshire, United Kingdom; [2]Waters Corporation, Manchester, United Kingdom*

TP 229 **Increasing Efficiency of the Bioanalytical Screening Laboratory: Concurrent Reactive Metabolite and Time Dependent P450inactivation Decision-Making using an Assay Consolidation Approach**; Sabrina Zhao; Amit Kalgutkar; John Soglia; *Pfizer Inc, Groton, CT*

TP 230 **Post-Extraction Dilution Approach Extended Linear Dynamic Range for Quantitative Bioanalysis by Liquid Chromatography-Tandem Mass Spectrometry**; Xiaodong Zhu; Austin C. Li; Wilson Z. Shou; Lisa Magis; Dennis Alton; Natasha Dow; *Covance Laboratory, Inc., Madison, WI*

TP 231 **Systematic Metabolite Profiling of Drug Discovery Compounds in Plasma Samples using Liquid Chromatography/ Quadrupole-Linear Ion Trap Mass Spectrometric Methods**; Yunsheng Hsieh; Fangbiao Li; Walter Korfmacher; *Schering-Plough, Kenilworth, NJ*

TP 232 **Automated Identification of Unknown Compounds Employing Nanoelectrospray LC/MS Coupled with Infusion MS^n Employing the Concept of Precursor Ion Fingerprinting;** Timothy R Croley[2]; Frederic L. Ciner[2]; Michelle Sheldon[2]; Robert A Everley[2]; Gary Schultz[1]; Ellen Pace[1]; Robert Mistrik[3]; Jack Henion[1]; *[1]Advion BioSciences, Inc, Ithaca, NY; [2]Division of Consolidated Lab Services, Richmond, VA; [3]HighChem, Bratislava, Slovakia*

TP 233 **Automated High Throughput LC/MS/MS Strategies for *in-vitro* Metabolism Workflows: Advantages of Automated Method Development and Quantitative Batch Processing;** Anhony J. Romanelli[1]; James Ferguson[1]; Wen-Chen Hsu[2]; Pengdeth Lim[2]; Huafen Liu[2]; May Young[2]; Jane Huang[2]; Loren Olson[1]; *[1]Applied Biosystems, Framingham, MA; [2]Roche, Palo Alto, CA*

TP 234 **Comprehensive Detection and Characterization of Drug Metabolites in Biological Matrices using a High Resolution Mass Spectrometer LTQ Orbitrap**; Shinki Kawaguchi; Yoshihisa Sano; Raku Shinkyo; Tsutomu Yoshimura; *Eisai Co., Ltd, TSUKUBA, JAPAN*

TP 235 **Mass Tracking Error Introduced by Automaton Rapid Scanning on Sciex 4000 and a Simple Correction;** Lee A Gorman; Russell H Robins; *Pfizer, Inc., Chesterfield, MO*

TP 236 **High-Throughput Analysis of Six Silymarin Flavonolignans in Human Plasma by LC-ESI-MS Combining with a 96-Well Protein Precipitation Plate**; Zhiming Wen; Zhiqing Qiao; Roy L. Hawke; Philip C. Smith; *University of North Carolina at Chapel Hill, Chapel Hill, NC*

TP 237 **A Novel "Peak Parking" Strategy for UPLC-MS/MS Detection for Enhanced Performance of Bioanalytical Assays**; Fumin Li; Jacob Maguigad; Mary Pelzer; Xiangyu Jiang; Qin C. Ji; *Covance Inc., Madison, WI*

DRUGS: QUANTITATION BY LC/MS

TP 238 **A Sensitive Semi-Automated Method for the Quantification of Calcitriol in Human Plasma by LC-MS/MS**; Roger Coe; Mary Petersen; Anthony Podany; *MDS Pharma Services, Lincoln, NE*

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TP 239 **Importance of using Extremely High Purity Stable Labeled Internal Standards for Successful LC-MS/MS Bioanalysis**; Fabio Garofolo; Annik Bergeron; Alex Kazandjian; Troy Bradley; *Algorithme Pharma Inc., Laval (Montreal), QC, Canada*

TP 240 **Development of an On-Column Derivatization Assay for the Quantification of Tenofovir in Human Plasma by LC-MS/MS**; Corey Ohnmacht; Anthony Podany; Roger Coe; *MDS Pharma Services, Lincoln, NE*

TP 241 **Impact of Plasma Anticoagulant Counterion Choice on Drug Stability and Matrix Effect in LC-MS and LC-MS/MS Method Development**; Melanie Bergeron; Annik Bergeron; Troy Bradley; Fabio Garofolo; *Algorithme Pharma Inc., Laval (MONTREAL), QC, Canada*

TP 242 **A Highly Sensitive Method for the Quantitation of Nicotine, Cotinine, and *trans*-3'-Hydroxycotinine in Human Plasma (EDTA)**; Ginny B. James; Kirk Newland; Ridha Nachi; Daryl Grafelman; Chad Briscoe; *MDS Pharma Services, Lincoln, NE*

TP 243 **Quantitative Determination of Paclitaxel and 6-a-Hydroxy Paclitaxel in Human Plasma by Turbo Ion Spray LC/MS/MS**; Stacey L. Zeman; Sara Jones; Daniel Mulvana; *Advion BioServices, Ithaca, NY*

TP 244 **Validation of a Method for Methotrexate and 7-Hydroxymethotrexate in Human Protein-Free Filtrate by LC/MS/MS for Use in Protein Binding Studies**; Sara L Jones; Daniel E Mulvana; *Advion BioServices, Ithaca, NY*

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TP 246 **A Validated Method for Quantitation of Lamotrigine in Human Plasma by Liquid Chromatography/Tandem Mass Spectrometry**; Sharath Bojja; *Allied Research International, Etobicoke, Canada*

TP 247

TP 248 **HILIC/MS/MS Quantitation of Plasma Nucleoside 8-Hydroxy-2'-Deoxyguanosine using 96-Well MAX without Solvent Evaporation**; Wenying Jian; Duxi Zhang; Naidong Weng; *BMS Company, Princeton, NJ*

TP 249 **Determination of Epinephrine Concentrations in Human Plasma by High Performance Liquid Chromatography with Tandem Mass Spectrometry**; J. Brian Nofsinger[1]; Michael S. Allen[1]; D. Craig Sykes[1]; Mohammad Hamzavi[2]; *[1]Enthalpy Analytical, Inc., Durham, NC; [2]Dey, L.P., Napa, CA*

TP 250 **Automated Liquid-Liquid Extraction of Dihydroergotamine in Human Plasma with Quantitation by HPLC-Tandem Mass Spectrometry**; Jason Heidrich; Melissa J. Meyer; Yufen Zhang; Laura V. Baum; Andrew M. Osenga; Dan J. Aufman; Ardeshir Khadang; *PRACS Institute Ltd., Fargo, ND*

TP 251 **Quantitation of Triapine in Human Plasma by a Highly Sensitive LC-MS/MS Assay**; Chen Ren[1]; Zhongfa Liu[1]; Tanios Bekaii-Saab[2]; Mitch Phelps[1]; Kenneth K. Chan[3]; *[1]College of Pharmacy, The Ohio State University, Columbus, OH; [2]College of Medicine and Public Health, OSU, Columbus, OH; [3]College of Pharmacy & Medicine Public Health, OSU, Columbus, OH*

SMALL MOLECULES: PHARMA FOCUS

TP 252 **Structure Elucidation of Sildanafil Analogues by MSn and Accurate Mass Measurement**; Yusuke Inohana[1]; Ichiro Hirano[1]; Shinichi Yamaguchi[1]; Kiyomi Arakawa[1]; Simon Ashton[2]; Neil Loftus[2]; John Warrander[2]; *[1]Shimadzu corporation, Kyoto, JAPAN; [2]Shimadzu ISS, Manchester , UK*

TP 253 **Study of Free Radical Cations Generated from ESI-CID-MS/MS of Small Molecule Drugs using LTQ and Orbitrap Mass Spectrometers**; Guifen Xu[1]; Wotang Huang[1]; Jennifer Zhang[2]; Thomas D. McClue[2]; Miao Shichang[1]; *[1]Amgen, South San Francisco, CA; [2]Thermo Scientific, San Jose, CA*

TP 254 **Simultaneous Quantification of Malononitrilamide (FK778) and Its Metabolites M1 and M3 in Mouse Plasma by LC-MS/MS**; Yu-Luan Chen[1]; Shahzad Akhtar[1]; Kenji Tabata[2]; Ala M Alak[1]; Masakazu Kobayashi[3]; *[1]Astellas Pharma US, Inc., Evanston, IL; [2]Astellas Pharma Inc., Tokyo, Japan; [3]Astellas Research Institute of America, Evanston, IL*

TP 255 **Rapid Analysis of Pharmaceuticals and their Metabolites with Atmospheric Pressure Infrared MALDI Mass Spectrometry**; Bindesh Shrestha; Yue Li; Akos Vertes; *George Washington University, Washington, DC*

TP 256 **A Novel Approach to Structural Elucidation and Root Cause Analysis of Pharmaceutical Impurities and Degradation Products using UPLC-Q-ToF Pseudo-MS^3**; Esther S Hwang; Samantha A Leidner; Christopher M McGinley; Oystein Loe; Paul M. Bigwarfe Jr; *Hospira, Inc., Lake Forest , IL*

TP 257 **Laser Induced Silicon Microcolumn Arrays as a Matrix-Free Platform for the Analysis of Pharmaceuticals by Soft Laser Desorption/Ionization Mass Spectrometry**; Bennett N. Walker; Akos Vertes; *The George Washington University, Washington, DC*

TP 258 **Identification of Organic Acids in Pharmaceutical Tablets by GC-MS and LC-MS/MS**; Ian P Collin; Jean-Claude Wolff; *GlaxoSmithKline, Stevenage, United Kingdom*

TP 259 **Structural Identifications of Mometasone Furoate Steroid Related Impurities in a LTQ-Orbitrap Hybrid Mass Spectrometer**; Guodong Chen; Ibrahim Daaro; Birendra N. Pramanik; *Schering-Plough Research Institute, Kenilworth, NJ*

TP 260 **Automatic Generation of Extracted Ion Chromatograms for Mass Ion Peaks with Specific Isotope Patterns**; Jiyuan Ma[1]; Zhe-ming Gu[1]; Ming Gu[2]; Yongdong Wang[2]; *[1]XenoBiotic Laboratories, Inc, Plainsboro, NJ; [2]Cerno Bioscience LLC, Danbury, CT*

TP 261 **Identification of the Impurities of Budesonide using Small Particle Liquid Chromatography and Q-Tof Mass Spectrometry**; Warren Potts III; Michael Jones; Robert Plumb; *Waters Corporation, Milford, MA*

TP 262 **Use of GC-MS and LC-MS as Complementary Techniques for Unambiguous Accurate Mass Identification of Two Unknown Development Compound Impurities** ; K. Wayne Taylor; Matthew Clemens; *Lilly, Indianapolis, IN*

TP 263 **Characterization of a Major Degradation Product of Phenylephrine in Pharmaceutical Formulations against Common Cold by LC/MS/MS and Tandem FTICR-MS Analysis**; Li-kang Zhang[1]; Jesse Wong[1]; Leonard Wiseman[2]; Shamim Al-Mamoon[2]; Thomas Cooper[2]; Tze-Ming Chan[1]; Birendra Pramanik[1]; *[1]Schering-Plough Research Inst., Kenilworth, NJ; [2]Schering-Plough HealthCare Products, Memphis, Tennessee*

TP 264 **Identification of an Unknown Peak in Clarinex Tablets by LC-MS^n: The Identified Unknown Peak was Found from Lab Comtamination**; Mingxiang Lin; Min Li; Robert Markovich; Abu Rustum; *Schering-Plough Corporation, Union, NJ*

TP 265 **Structural Characterization of Metoclopramide Radiolysis Products by LC-MS-MS**; Jean-Louis Habib Jiwan[1]; Aubert Maquille[2]; Tilquin Bernard[2]; *[1]Université catholique de Louvain, Louvain La Neuve, Belgium; [2]UCL, Woluwé, Belgium*

TP 266 **Walk-Up Time-of-Fight Technology for the Process Organic Chemist: A Robust, User-Friendly, System for**

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Accelerating Pharmaceutical Process Development; Edward M. Sheldon; Todd A. Gillespie; Neil J. Kallman; *Lilly, Indianapolis, IN*

PEPTIDES: POST TRANSLATIONAL MODIFICATIONS II

TP 267 **Characterization of O-linked Glycopeptides and Glycation using ETD/CID (electron transfer/collision induced dissociation) with Linear Ion Trap Mass Spectrometry**; Bao-jen Shyong; Oleg Borisov; Victor Ling; *Genentech, Inc, S. San Francisco, CA*

TP 268 **Shotgun Proteomic Profiling of Histone Isoforms in Chronic Lymphocytic Leukemia by use of Chemical derivatization**; Mitchell Meade; Michael A Freitas; Mark R Parthun; David M Lucas; Amy R Knapp; Amy R Knapp; John C Byrd; *Ohio State University, Columbus, OH*

TP 269 **Unambiguous Determination of Isobaric Modificaitons by LC-MS and High Mass Accuracy**; Lanhao Yang; *the Ohio State University, Columbus, OH*

TP 270 **High Resolution Mass Spectrometry Study of Chemical and Environmental Stimuli on the Post Translational State of Histone H4**; C. Logan Mackay[1]; Stefan Weidt[1]; Bernard Ramsahoye[2]; Nick Gilbert[2]; Ted Hupp[2]; Pat Langridge-Smith[1]; R. Larry Hayward[2]; *[1]University of Edinburgh, Edinburgh, Scotland; [2]Edinburgh Cancer Centre, Edinburgh, Scotland*

TP 271 **Large Scale Deamidation Detection and Quantification in Aged Lens Tissues**; Surendra Dasari; Phillip A. Wilmarth; D. Leif Rustvold; Ashok P. Reddy; Srinivasa R. Nagalla; Larry L. David; *School of Medicine, Oregon Health & Science Univ, Portland, OR*

TP 272 **Protein Digestion by Endoproteinase AspN for Improved Localization of Protein Modifications by Peptide End-Specific Marker Ions**; Dominic Winter; Wolf D. Lehmann; *German Cancer Research Center, Heidelberg, GERMANY*

TP 273 **Screening and Sequencing of Glycated Proteins by Neutral Loss Scan LC/MS/MS on Q-ToF Type Mass Spectrometers**; Himanshu Gadgil; Pavel Bondarenko; Michael Treuheit ; Da Ren; *Amgen, Thousand Oaks, CA*

TP 274

TP 275 **Mining Shotgun Proteomic Data for the Role of Post-Translational Modifications in the Adaptive Response of *Shewanella oneidensis* to Chromate Exposure**; Melissa Thompson[1]; Dorothea Thompson[3]; Robert Hettich[2]; *[1]University of Tennessee-Knoxville, Knoxville, TN; [2]Oak Ridge National Laboratory, Oak Ridge, TN; [3]Purdue University, West Lafayette, IN*

TP 276 **Characterization of γ-Carboxyglutamate-Containing Peptides using CAD MS-MS**; Kevin Van Cott; Anna Oommen; *UNL Biological Process Development Facility, Lincoln, NE*

TP 277 **Analysis of Glycopeptides using ECD Combined with TOF Mass Spectrometer**; Naomi Manri[1]; kisaburo deguchi[2]; Yuki Ito[2]; Takashi Baba[1]; Atsumu Hirabayashi[1]; Hiroyuki Satake[1]; Toshiyuki Yokosuka[1]; *[1]Hitachi, Ltd., Kokubunji, JAPAN; [2]Hokkaido university, Sapporo, Japan*

TP 278 **A New LC-MS Approach Combining CID, ETD, and CID of Charge-Reduced Species for Trace-Level Characterization of Proteins with Post-Translational Modifications**; Shiaw-lin Wu[1]; Andreas F.R. Hühmer[2]; Zhiqi Hao[2]; Barry L. Karger[1]; *[1]Northeastern University, Boston, MA; [2]Thero Fisher Scientific, San Jose, CA*

TP 279 **High- Throughput Mapping of Ubiquitination Sites on Proteins using Targeted Mass Spectrometric Approach**; Sahana Mollah[1]; David Arnott[2]; Qui Phung[2]; Ingrid Wertz[2]; Vishva Dixit[2]; Nobuhiko Kayagaki[2]; Jennie Lill[2]; *[1]Applied Biosystems, Foster City, CA; [2]Genentech, South San Francisco, CA*

TP 280 **Analysis of Human Histone Proteins Following Exposure to Diepoxybutane**; Min-joon Han; Ryan Svoboda; Emine C. Koc; Hasan Koc; *Pennsylvania State University, University Park, PA*

TP 281 **Enrichment and Analysis of Non-Enzymatically Glycated Peptides: Boronate Affinity Chromatography Coupled with Electron Transfer Dissociation Mass Spectrometry**; Qibin Zhang[1]; Thomas O. Metz[1]; Ning Tang[2]; Jonathan W. C. Brock[3]; Heather M. Mottaz[1]; Richard D. Smith[1]; *[1]Pacific Northwest National Laboratory, Richland, WA; [2]Agilent Technologies, Santa Clara, CA; [3]University of South Carolina, Columbia, SC*

TP 282 **O-Linked N-Acetylglucosamine (O-GlcNAc) Post-Translational Modification Analysis using High Energy CID on a Tandem TOF/TOF Mass Spectrometer with Curved Field Reflectron**; Dwella Moton Nelson; Zihao Wang; Kaoru Sakabe; Gerald W. Hart; Robert J. Cotter; *Johns Hopkins University School of Medicine, Baltimore, MD*

TP 283 **Characterization of N-linked Glycopeptides with Ion Trap MS using ETD and CID**; Manfred Wuhrer[1]; M. Isabel Catalina[1]; Carolien A. M. Koeleman[1]; André M. Deelder[1]; Markus Lubeck[2]; Carsten Baessmann[2]; *[1]Leiden University Medical Center, Leiden, The Netherlands; [2]Bruker Daltonik GmbH, Bremen, Germany*

TP 284 **Collision Induced Dissociation-Based Characterization of the Antimicrobial Peptide-Nucleotide Microcin C7-C51 by Electrospray-Ionization/Desorption Mass Spectrometry**; Vanessa Petit[1]; Severine Zirah[1]; Sylvie Rebuffat[1]; Jean-Claude Tabet[2]; *[1]Museum National d'Histoire Naturelle UMR5154 CNRS, Paris, France; [2]Université Pierre et Marie Curie UMR7613 CNRS, Paris , France*

IMAGING APPLICATIONS: PROTEOMICS

TP 285 **MALDI-MS Imaging of Neurological Disorders**; Richard J A Goodwin; Stuart R Cobb; Hilary V Carswell; Susan M Cochran; Andrew R Pitt; *University of Glasgow, Glasgow, United Kingdom*

TP 286 **Characterizing Neuronal Cells in Microfluidic Devices using Mass Spectrometric Imaging**; Kyubong Jo; Michael Heien; Ming Zhong; Elena Romanova; Jonathan Sweedler; *University of Illinois Urbana Champaign, Urbana, IL*

TP 287 **Protein Profiling at the Tumour:Liver Margin in Colorectal Liver Metastasis using MALDI-Mass Spectrometry Imaging**; Marie-Claude Djidja[1]; Vikki Carolan[1]; Ali Majeed[2]; David Mangnall[2]; Nigel Bird[2]; Malcolm Clench[1]; *[1]Sheffield Hallam University, Sheffield, United Kingdom; [2]Royal Hallamshire Hospital, Sheffield, United Kingdom*

TP 288 **Correlation of Drug Distribution and Proteome Response in Tissue by Imaging MALDI Mass Spectrometry**; Sara L. Frappier; Sheerin Khatib-Shahidi; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 289 **Imaging Mass Spectrometry for the Investigation of Molecular Events Involving Lithium Protection Against Radiation**; Sheerin Khatib-Shahidi; Dinesh Thotala; Eugenia M. Yazlovitskaya; Dennis E. Hallahan; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 290 **A Multi-Faceted Approach to the Mass Spectrometric Imaging of Spinal Cord Sections**; Eric B. Monroe[1]; Jenna L. Losh[1]; Nathan G. Hatcher[1]; Stanislav S. Rubakhin[1]; Howard B. Gutstein[2]; Jonathan V. Sweedler[1]; *[1]University of Illinois, Champaign , IL; [2]UT-MD Anderson Cancer Center, Houston, TX*

TP 291 **Association of L-MALDI TOF Proteomics with Apoptosis in PC3 Induced Mice Tumor**; Doris Terry; Rakesh Sharma; *Florida State University, Tallahassee, FL*

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TP 292 **MALDI Tissue Profiling of Integral Membrane Proteins**; Angus C Grey; Danielle B Thibault; Kevin L Schey; *Medical University of South Carolina, Charleston , SC*

TP 293 **Monitoring Mouse Prostate Development by Profiling and Imaging Mass Spectrometry**; Pierre Chaurand[1]; Mohammed A. Rahman[1]; Tamela Hunt[1]; James A. Mobley[2]; Susan Kasper[1]; Richard M. Caprioli[1]; *[1]Vanderbilt University, Nashville, TN; [2]University of Alabama in Birmingham, Birmingham, AL*

TP 294 **High Resolution MALDI MS Profiling and Imaging of Neuronal Tissues for Differential Display of Neuropeptidomes**; Lingjun Li; Stephanie S. DeKeyser; Joshua J. Schmidt; Ruibing Chen; Mingming Ma; *University of Wisconsin, Madison, WI*

TP 295 **Following Temporal Biological Processes using Imaging MALDI MS: Implantation and Early Embryo Growth in Mice**; Kristin E. Burnum; Susanne Tranguch; S.K. Dey; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 296 **MALDI Tissue Imaging of Peptides and Proteins in Plants**; Barbara Leinweber[1]; David W. Galbraith[2]; Paul J. Kowalski[3]; Ravishankar Palanivelu[2]; Frans Tax[5]; Serrine S. Lau[4]; *[1]University of Arizona, Tucson, AZ; [2]Plant Sciences, University of Arizona, Tucson, AZ; [3]Bruker Daltonics, Billerica, MA; [4]School of Pharmacy, University of Arizona, Tucson, AZ; [5]Molecular and Cell Biology, University of Arizona, Tucson, AZ*

TP 297 **Imaging Mass Spectrometry of Breast Cancer Tissue : Application and New Developments**; Ron M.A. Heeren[1]; Erika R. Amstalden[1]; Martin Froesch[1]; Ivo Klinkert[1]; Tiffany R. Greenwood[2]; Kristine Glunde[2]; *[1]FOM Inst. Atomic/Molecular Physics, Amsterdam, Netherlands; [2]Johns Hopkins University School of Medicine, Baltimore, Maryland*

TP 298 **Profiling ALS Mouse Brain Proteome at Cellular Resolution by MALDI MSI**; Satish K Murari[1]; Nathalie YR Agar[2]; Jeffrey N Agar[1]; *[1]Brandeis University, Waltham, MA; [2]Harvard Medical School, Boston, MA*

TP 299 **From Direct tissue Analysis to Tissue Validation by Mass Spectrometry of Ovary Cancer Biomarkers Hunting**; Jonathan Stauber[1]; Remi Lemaire[1]; Maxence Wisztorski[1]; Sonia Ait Menguellet[1]; Pierre Collinet[3]; Jean Pierre Lucot[3]; Denis Vinatier[3]; Annie Desmons[1]; Michel Deschamps[2]; Gottfried Proess[2]; Ivo Rudlof[2]; Michel Salzet[1]; Isabelle Fournier[1]; *[1]MALDI Imaging Team, FRE CNRS 2933, USTL, villeneuve d'ascq, RANCE; [2]EUROGENTEC, Eurogentec Biologics Department, Liege, belgium; [3]Jeanne de flandres Hospital, Lille, France*

PROTEOMICS QUANTITATIVE: STABLE ISOTOPE LABELING II

TP 300 **Quantitative Proteomic and Transcriptomic Analysis of Neuroblastomas**; Li-Rong Yu[1]; Young K. Song[2]; Jun S. Wei[2]; Qing-Rong Chen[2]; Steffen Durinck[3]; Timothy D. Veenstra[1]; Javed Khan[2]; *[1]SAIC-Frederick, Frederick, MD; [2]National Cancer Institute, Bethesda, MD; [3]K. U. Leuven, Leuven, Belgium*

TP 301 **Effect of TNF-Alpha on ARPE-19 for Differential Protein Expression**; Eunkyung An; Josheph Lin; Heather Gordish-Dressman; Yetrib Hathout; *Children's National Medical Center, Washington, DC*

TP 302 **Quantitative Plant Proteomics: A Double Standard Study using Difference in Gel Electrophoresis and ^{15}N-Labeling Combined with Mass Spectrometry**; Bettina Warscheid[2]; Romano Hebeler[2]; Kai Reidegeld[2]; Paul P. Dijkwel[1]; Marcel J.G. Sturre[1]; Martin Eisenacher[2]; Christian Stephan[2]; Hemut E. Meyer[2]; *[1]University of Groningen, Groningen, The Netherlands; [2]Ruhr-University Bochum, Bochum, Germany*

TP 303 **Quantitation of Rapamycin Effects in Yeast by Shotgun Proteomics**; Marjorie Fournier; Christopher Seidel; Karin Zueckert-Gaudenz; Norman Pavelka; Mihaela Sardiu; Laurence Florens; Michael Washburn; *Stowers Institute for Medical Research, Kansas City, MO*

TP 304 **2-MEGA: An Optimized Protocol for Determining Differential Protein Expression using Guanidination and Isotopic Dimethylation Labeling**; Andy Lo; Chengjie Ji; Liang Li; *University of Alberta, Edmonton, Canada*

TP 305 **Multiplex Quantitative Proteomic Differential Analysis of Treated Macrophage Cells: Combining Label-Free Peak Alignment and iTRAQ Labeling for Differential Quantification**; Jeremiah Tipton[1]; Brown Joseph[2]; Dharsee Moyez[3]; Stewart Ian [3]; Ewing Rob[3]; Goodenhow Maureen[2]; Busby Jennifer[1]; *[1]Scripps Florida, Jupiter, FL; [2]University of Florida, Gainesville, FL; [3]Infochromics, Toronto, Ontario, Canada*

TP 306 **Study of Mycobacterial Lipid Mediated Macrophage Response via Double Standards in Quantitative Proteomics**; Wenqing Shui[1]; Sarah Gilmore[1]; Jun Liu[3]; Jay Keasling[2]; Carolyn Bertozzi[1]; *[1]Department of Chemistry, UC Berkeley, Berkeley, CA; [2]Department of Chemical Engineering, UC Berkeley, Berkeley, CA; [3]Bayer HealthCare LLC, Berkeley, CA*

TP 307 **Improving Peptide Identification through Complementary Approaches: using SILAC Labeling Compared to Complementary Fragmentation Techniques**; Michael L. Nielsen[1]; Mikail M. Savitski[2]; Lyris F. de Godoy[1]; Jesper V. Olsen[1]; Roman A. Zubarev[2]; Matthias Mann[1]; *[1]Max-Planck-Institute for Biochemistry, Martinsried (near Munich), Germany; [2]Biological and Medical Mass Spectrometry, Uppsala, Sweden*

TP 308 **ANIBAL – ANIline-Benzoic Acid Labeling: Universal, Stable-Isotope Based Quantitative Proteomics Targeting Amino and Carboxylic Groups of Intact Proteins**; Alexandre Panchaud[1]; Jenny Hansson[2]; Michael Affolter[2]; Rachid Bel Rhlid[2]; Philippe Moreillon[1]; Martin Kussmann[2]; *[1]Faculty of Biology and Medicine, Univ. of Lausanne, Lausanne, Switzerland; [2]Nestle Research Center, Lausanne, Switzerland*

TP 309 **Gene Function Analysis in Drosophila by RNAi-SILAC-Based Quantitative Proteomics**; Tiziana Bonaldi[1]; Jürgen Cox[1]; Tobias Straub[2]; Chanchal Kumar[1]; Peter Becker[2]; Matthias Mann[1]; *[1]Max Planck Institute of Biochemistry, Munich, Germany; [2]Adolf Butenandt-Institute, LMU, Munich, Germany*

PROTEOMICS: LABEL FREE QUANTITATION

TP 310 **Isotope-Free Relative Quantification for Much Improved Dynamic Range**; John M Asara[1]; Heather R Christofk[1]; Lisa M Freimark[1]; Atsuo Sasaki[1]; Lewis C Cantley[1]; *[1]Beth Israel Deaconess Medical Center, Boston, MA; [2]Harvard Medical School, Boston, MA*

TP 311 **A Label-Free Quantitation Method for Ion-Trap/High-Resolution Hybrid Instruments**; Shenheng Guan[1]; Juan Oses-Prieto[1]; Feixia Chu[1]; Yingying Huang[2]; David A. Maltby[1]; Alma L. Burlingame[1]; *[1]University of California, San Francisco, CA; [2]ThermoFisher, San Jose, CA*

TP 312 **Proteomics Studies of Axonal Transport in Motor Neurons**; Zhenyu Huang; Anna-Lena Strom; Jianjun Zhai; Renee Kilty; Haining Zhu; *University of Kentucky, Lexington, KY*

TP 313 **Quantitative Proteomic Analysis of Fanconi Anemia Complementation Type C Deficient MEFs in Response to Oxidative Condition using Label-Free LC/MS Method**; Mu Wang; *Indiana University, Indianapolis, IN*

TP 314 **Nano-LC, dual channel (Cy3, Cy5) Laser Induced Fluorescence Detector and nanoESI-hQh-FT-ICR-MS**

for Quantitative Proteomics; Caroline Tokarski[1]; Jocelyne Tahar[2]; Christian Rolando[1]; *[1]Univ. des Science/Tech de Lille, Villeneuve d'Ascq, France; [2]Picometrics, Toulouse, France*

TP 315 **Large Scale Proteome and PTM Analysis of Arabidopsis by LTQ-Orbitrap MS; Comparison of Cell Lysate and the Plastid Organelle**; Boris Zybailov; Qi Sun; Giulia Friso; Verenice Ramirez-Rodriguez; Heidi Rutschow; Klaas van Wijk; *Cornell University, Ithaca, NY*

TP 316 **Quantitative Profiling of Protein Phosphorylation by Label-Free LC/MS**; Chia-Feng Tsai[1]; Hsin-Hung Huang[2]; Yet-Ran Chen[2]; Yu-Ju Chen[2]; *[1]National Taiwan Normal University, Taipei, Taiwan; [2]Institute of Chemistry, Academia Sinica, Taipei, Taiwan*

PROTEOMICS: QUANTITATION

TP 317 **Extracting more Information from Shotgun Proteomics Data Sets by Learning Peptide Detectability**; Randy J. Arnold; Pedro Alves; David E. Clemmer; Milos V. Novotny; James P. Reilly; Haixu Tang; Predrag Radivojac; *Indiana University, Bloomington, IN*

TP 318 **Plasma Proteomics of Colon Cancer Patients -Individual Regulation of Protein Isoforms Identified by the ICPL TRIPLEX Technology**; Eva-Maria Keidel[1]; Achim Brunner[1]; Thomas M. Halder[2]; Detlev Suckau[3]; Silke Martin[4]; Josef Kellermann[1]; Friedrich Lottspeich[1]; *[1]MPI of Biochemistry, Martinsried, Germany; [2]Toplab GmbH, Martinsried, Germany; [3]Bruker Daltonik GmbH, Bremen, Germany; [4]Blood Donor Centre Bavarian Red Cross, Munich, Germany*

TP 319 **Analysis of Leukocyte Extract from the American Alligator (*Alligator mississippiensis*) using Gel Electrophoresis and Nano Liquid Chromatography with Mass Spectrometry**; Lancia N.F. Darville[1]; Mark E. Merchant[2]; Kermit K. Murray[1]; *[1]Louisiana State University, Baton Rouge, LA; [2]McNeese State University, Lake Charles, LA*

TP 320 **Rapid Simultaneous Identification and Relative Quantitation of Proteins Separated by Gel Electrophoresis**; Valerie Cavett; Jeremiah D. Tipton; Scott A. Busby; Jennifer Caldwell Busby; *The Scripps Research Institute, Scripps Florida, Jupiter, FL*

TP 321 **Variations of the *Arabidopsis thaliana* Mitochondrial Proteome assessed by Chip-Based Nano LC and Q-TOF Mass Spectrometry and DIGE;** Nicolas L Taylor[1]; Chun Pong Lee[1]; Thomas Hennessy[2]; Joshua L Heazlewood[1]; A. Harvey Millar[1]; *[1]ARC Centre of Excellence in Plant Energy Biology, Perth, Australia; [2]Agilent Technolgies, Melbourne, Australia*

TP 322 **Comprehensive Expression Profiling and Trace-Level Identification of Unlabeled Peptides Ions in 2DLC-MS Proteomics Experiments using Integrated Detection and Clustering Software**; Eric Bonneil[1]; Gagandeep Jaitly[1]; Navdeep Jaitly[2]; Christelle Pomies[1]; Pierre Thibault[1]; *[1]IRIC-Universite de montreal, Montreal, Canada; [2]Pacific Northwest National Laboratory, Richland, WA*

TP 323 **Rapid and Novel Method for Differential Proteomic Data Quality Evaluation**; Jiri Adamec[1]; Catherine P. Riley[2]; Sulma I. Mohammed[2]; Charles Buck[1]; *[1]Bidley Bioscience Center - Purdue University, West Lafayette, IN; [2]Purdue University, West Lafayette, IN*

TP 324 **Identification and Quantification of Unknown, Spiked Proteins within a Highly Complex Protein Mixture by using the ICPL TRIPLEX Technology**; Thomas M. Halder[1]; Conny Ciosto[2]; Michael Kersten[1]; Dominik Dosch[2]; Eva-Maria Keidel[2]; Monika Zobawa[2]; Achim Brunner[2]; Josef Kellermann[2]; Friedrich Lottspeich[2]; *[1]TopLab GmbH, Martinsried D-82152, Germany; [2]Max-Planck-Institute for Biochemistry, Martinsried D-82152, GERMANY*

PROTEIN CONFORMATION II

TP 325 **Gas-Phase Structures of Large Human Transthyretin Aggregates: Evidence from Ion Mobility Mass Spectrometry**; Suk-Joon Hyung; Brandon T. Ruotolo; Carol V. Robinson; *Department of Chemistry, University of Cambridge, Cambridge, United Kingdom*

TP 326 **H/D Exchange Mass Spectrometric Studies of p38 MAP Kinase With Inhibitor SB203580**; Susan L. Chen[1]; Kyle Asmus[2]; Melissa Brock[2]; Sheng Li[2]; Virgil L. Woods, Jr. [2]; Roland S. Annan[1]; *[1]GlaxoSmithKline, King of Prussia, PA; [2]University of California, San Diego, La Jolla, CA*

TP 327 **Conformational Changes and Chemical Reactivity of the Ribosome: An Application of Limited Proteolysis and Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry**; Daisy-Malloy Hamburg[1]; MooJin Suh[2]; Patrick A. Limbach[1]; *[1]University of Cincinnati, Cincinnati, OH; [2]Cornell Weil College Medicine, New York, NY*

TP 328 **Cap-Free Structure of eIF4E Suggests a Basis for Conformational Regulation by its Ligands**; Nadeem Siddiqui[1]; Laurent Volpon[1]; Michael J Osborne[1]; Ivan Topisirovic[1]; Mike Aguiar[2]; Katherine LB Borden[1]; Bernard F Gibbs[2]; *[1]Dept. of Pathology and Cell Biology, Montreal, Canada; [2]Sheldon Biotechnology Center, McGill University, Montreal, Canada*

TP 329 **Identification of Coactivator Binding Epitopes on Nuclear Receptor Heterodimer Complexes with High Resolution Hydrogen Deuterium Exchange Mass Spectrometry**; Scott A. Busby; Michael J. Chalmers; Bruce D. Pascal; Mark R. Southern; Patrick R. Griffin; *Scripps Florida, Jupiter, FL*

TP 330 **Exploring Protein-Lipid Interaction by Chemical Cross-Linking and Mass Spectrometry**; Bill Huang; Hee-Yong Kim; *NIAAA/NIH, Rockville, MD*

TP 331 **Combining HDX-MS with Molecular Simulations for Drug Discovery**; David Schriemer[1]; Jack Tuszynski[2]; *[1]University of Calgary, Calgary, Canada; [2]University of Alberta, Edmonton, Canada*

TP 332

TP 333 **The Binding of Human Telomeryic Protein TRF2 to DNA as Explored by High Resolution PLIMSTEX and Novel Kinetic Modeling;** Justin Sperry[1]; Don L. Rempel[1]; Xiangguo Shi[2]; Yoshifumi Nishimura[3]; Satoko Akashi[3]; Michael L. Gross[1]; *[1]Washington University in St. Louis, Saint Louis, MO; [2]Harvard University, Cambridge, MA; [3]Yokohama City University, Tsurumi-ku, Yokohama, Japan*

TP 334 **HXMS Reveals Conformational and Dynamic Changes Associated with Activation of Lymphocytic Cell Kinase by the Viral Tip Protein**; David D. Weis[1]; Lori A. Emert-Sedlak[2]; Thomas E. Smithgall[2]; John R. Engen[3]; *[1]University of New Mexico, Albuquerque, NM; [2]University of Pittsburgh, Pittsburgh, PA; [3]The Barnett Institute, Northeastern University, Boston, MA*

TP 335 **ESI MS Study of Pepsin Inactivation: Implications of Small-Scale Protein Conformational Changes for Substrate Binding and Enzymatic Activity**; Agya K. Frimpong; Igor A. Kaltashov; *University of Massachusetts, Amherst, MA*

TP 336 **Analysis of the pH-Dependent Pore Formation of the Protective Antigen of Anthrax by Protein Oxidative Surface Mapping**; Joshua S. Sharp[1]; Jeffrey F. Kuhn[2]; Kenneth B. Tomer[1]; *[1]National Institute of Environmental Health Science, RTP, NC; [2]Varian, Inc. Scientific Instruments, Cary, NC*

TP 337 **Insights into How the "DNA Baton" is Passed in the BER Pathway, Mapping APE-1 and DNA Polymerase β Contacts**; Eizadora Yu; Sara Gaucher; Carmen Pancerella;

TUESDAY POSTERS

Ken Sale; Malin Young; Masood Hadi; *Sandia National Laboratories, Livermore, CA*

TP 338 **Separation of up to 100 Conformers of Large Protein Ions by FAIMS/MS and Approach to their Structural Attribution**; Alexandre A. Shvartsburg[1]; Sergei Noskov[2]; Tadeusz Bryskiewicz[3]; Randall Purves[3]; Richard D Smith[1]; *[1]USDoE PNNL, Richland, WA; [2]University of Calgary, Calgary, Canada; [3]Thermo Electron, Ottawa, Canada*

TP 339 **Structural Studies of Human Bile Acid CoA:Amino Acid N-Acyltransferase (hBAT) using Hydrogen/Deuterium Exchange**; Erin M Shonsey; Matthew B Renfrow; Sebyung Kang; Stephen Barnes; *University of Alabama at Birmingham, Birmingham, AL*

TP 340 **Domain-Specific Thermodynamic Analysis of Large Multi-Domain Proteins using SUPREX**; Liangjie Tang[1]; Konstantin Kazarian[2]; John C. Williams[2]; Michael C. Fitzgerald[1]; *[1]Duke University, Durham, NC; [2]Thomas Jefferson University, Philadelphia, PA*

TP 341 **Systematic Fragmentation Analysis of Peptide Complexes Generated by Collision-Induced Dissociative Crosslinking Reagents: Implications for Mass Spectrometry-Based Protein Structural Studies**; Erik J. Soderblom; Michael B. Goshe; *North Carolina State University, Raleigh, NC*

TP 342 **Deuterium Labeling in Ubiquitin during Hydrogen/Deuterium Exchange (HDX) and ESI-MS/MS: Scrambled or Sunny-Side Up?** Peter L Ferguson; Lars Konermann; *University of Western Ontario, London, Canada*

TP 343 **Controlled Oxidative Chemical Footprinting of Ribonuclease-S-Protein:S-Peptide Complex by Laser Flash Photolysis of Hydrogen Peroxide;** Brian C. Gau; Michael L. Gross; *Washington University, St. Louis, MO*

TP 344 **Hydrogen-Deuterium Exchange Provides Evidence for Presence of Mobile Water Molecules at the MHC-Peptide Binding Interface**; Sachin Patil; Lilly M. Saleena; Hermann von Grafenstein; *University of Toledo, Toledo, OH*

TP 345 **Testing the Efficiency and Specificity of Pepsins from the Antarctic Fish *Trematomus bernacchii* for HDX-MS Experiments**; Sebastien Brier[1]; Yan Wu[2]; Robert Taylor[2]; Vincenzo Carginale[3]; Antonio Capasso[3]; Clemente Capasso[3]; John R Engen[1]; *[1]The Barnett Institute, Boston, MA; [2]Department of Chemistry, University of New Mexico, Albuquerque, NM; [3]CNR Institute of Protein Biochemistry, Naples, Italy*

TP 346 **Probing Tertiary Structure of Bacterial Collagen Binding Domain (CBD) and Catalytic Domain in a Multi-domain Protein by Limited Proteolysis MALDI-TOF-MS**; Rohana Liyanage[1]; P. S. T. Leena[1]; C. R. Sides[1]; Nagarjuna Devarapalli[1]; Jennifer Gidden[1]; Philominathan O. Matsushita[2]; J. J. Sakon[1]; Jackson O. Lay, Jr[1]; *[1]University of Arkansas, Fayetteville, AR; [2]Kagawa Medical University, Miki-cho, Kagawa 761-0793, Japan*

TP 347 **Visualizing Actin in the Rigor State of the Acto-Myosin Motor by using Structural Mass Spectrometry**; J.K. Amisha Kamal[1]; Sabrina Benchaar[2]; Emil Reisler[2]; Mark chance[1]; *[1]Case Western Reserve University School of Medicine, Cleveland, OH; [2]University of California Los Angeles, Los Angeles, CA*

TP 348 **MS characterization of Serpin and its Complex Structures**; Xiaojing Zheng; Yuko Tsutsui; Patrick L. Wintrode; Mark R. Chance; *Case Western Reserve University, Cleveland, OH*

TP 349 **Differentiation of Biological Ion Shapes Employing Nanoelectrospray and Ion Mobility Mass Spectrometry**; Mark Allen[1]; John Shockcor[2]; Rob Plumb[2]; Alan Miller[2]; Chris Hughes[2]; Mark Baumert[1]; Jack Henion[1]; *[1]Advion BioSciences, Ithaca, NY; [2]Waters, Milford, MA*

PROTEINS: GENERAL

TP 350 **Proteomic Analysis of Thiol-Containing Proteins on the Platelet Surface**; Susan T. Weintraub; Xiuhua Sun; Nagaraj Manickam; Christopher A. Carroll; Kevin W. Hakala; David W. Essex; *University of Texas HSC, San Antonio, TX*

TP 351 **Separation and Partial Characterization of Dipeptidyl Peptidase IV Isoforms by Free Flow Electrophoresis and MALDI-TOF MS;** Patrick O'Mullan; David Craft; Craig Gelfand; *BD Diagnostics, Franklin Lakes, NJ*

TP 352 **Gluten Determination in Beer using Mass Spectrometric Techniques**; Dorcas Weber; Terry Cyr; Benjamin P.-Y. Lau; Samuel Benrejeb-Godefroy; *Health Canada, Ottawa, Canada*

TP 353 **An Aptly Positioned Azido Group in a Protein Cross-Linker for Facile Mapping of Amino Acids in Close Proximity**; Piotr Kasper; Jaap Willem Back; Maxime Vitale; Alloysius F. Hartog; Winfried Roseboom; Leo J. de Koning; Jan H. van Maarseveen; Anton O. Muijsers; Luitzen de Jong; Chris G. de Koster; *University of Amsterdam, Amsterdam, Netherlands*

TP 354 **Therapeutic Protein Aggregates: Direct Analysis by Chemical Cross-Linking and High-Mass MALDI Mass Spectrometry**; Alexis Nazabal; Ryan Wenzel; *CovalX AG, Zürich, Switzerland*

TP 355 **Cross-Linking and UPLC/MS/MS Analysis of the Tif34/Tif35 Protein Complex**; Amadeu H Iglesias; Fabio C Gozzo; *Brazilian Synchrotron Light Source, Campinas, Brazil*

TP 356 **Copper Binding of the β-2-Microglobulin Oligomers Studied by Metal-Catalyzed Oxidation Reactions and Mass Spectrometry**; Srikanth Rapole; Richard W. Vachet; *University of Massachusetts, Amherst, MA*

TP 357 **Investigating Domain Swapping in the C-Terminal Domain of the HIV-1 Capsid Protein using Chemical Cross-Linking and Mass Spectrometry**; Lisa M. Jones; Sebyung Kang; Matthew B. Renfrow; Peter E. Prevelige, Jr; *University of Alabama at Birmingham, Birmingham, AL*

TP 358 **Structural Studies of Antigens Associated with the Autoimmune Disease, Sjogren's Syndrome**; Leesa J Deterding; Rachelle Bienstock; Kenneth B Tomer; *NIEHS/NIH/DHHS, RTP, NC*

TP 359 **ABRF-PRG2007: Advanced Quantitative Proteomics Study**; A. M. Falick[1]; M. J. MacCoss[2]; W. S. Lane[3]; K. S. Lilley[4]; B. S. Phinney[5]; N. E. Sherman[6]; S. T. Weintraub[7]; H. E. Witkowska[8]; N. A. Yates[9]; *[1]University of California, HHMI MS Lab, Berkeley, CA; [2]University of Washington, Dept. of Genome Science, Seattle, WA; [3]Harvard University, Cambridge, MA; [4]University of Cambridge, Cambridge, United Kingdom; [5]University of California, Davis, CA; [6]University of Virginia, Charlottesville, VA; [7]University of Texas Health Sciences Center, San Antonio, TX; [8]University of California BRC MS Facility, San Francisco, CA; [9]Merck Research Laboratories, Rahway, NJ*

TP 360 **Analysis of the Arp2/3 Protein Complex using Electron Transfer Dissociation**; Kristie M. Lindsey Rose; Namrata D. Udeshi; Tatyana I. Kotova; Jeffrey Shabanowitz; Dorothy A. Schafer; Donald F. Hunt; *University of Virginia, Charlottesville, VA*

TP 361 **Immunoaffinity-HPLC/MS Analysis of Food Allergens;** Kevin J. Shefcheck; Carmen Westphal; Fenhong Song; John H. Callahan; *USFDA, College Park, MD*

TP 362 **MS2DB: Mining and Identification of Disulfide Bonds in Proteins Utilizing Mass Spectrometric Data**; Ten-yang Yen; Timothy Lee; Rahul Singh; Alexander Chavez; Bruce Macher; *San Francisco State University, San Francisco, CA*

TUESDAY POSTERS

TP 363 **Identification of Disulfide Bridges in *C. Botulinum Neurotoxin* by Mass Spectrometry**; Nemone Muster; Hua Huang; Tai Huynh; Elizabeth Gielow; Curtis Monnig; Marc Verhagen; *Allergan Inc., Irvine, CA*

TP 364 **Deuterium Exchange Mass Spectrometry Studies of GroupIA PLA2 utilizing Novel Methods for Lipid Protein Interactions and Highly Disulfide Bound Proteins**; John Burke[1]; *[1]UCSD, La Jolla, CA; [2]University of California San Diego, La Jolla, CA*

TP 365 **Glutathione S-Transferase Dynamics by H/D Exchange Mass Spectrometry**; Liming Hou; *University of Washington, Seattle, WA*

TP 366 **Application of I-DIRT Technology for Protein Interaction Studies in *D. melanogaster* Embryos;** Angeline Gradolatto[1]; Yanling Liu[2]; Michael Lehmann[2]; Alan J. Tackett[1]; *[1]University of Arkansas for Medical Sciences, Little Rock, AR; [2]University of Arkansas, Fayetteville, AR*

TP 367 **Biochemical and Mass Spectrometric Analysis of Disulfide Regulation in Redox-Active Glutamate Cysteine Ligase (GCL) from *Arabidopsis thaliana***; Leslie M. Hicks; Eric R. Bonner; Rebecca E. Cahoon; Rebecca S. Rivard; Jeanne Sheffield; Joseph M. Jez; *Donald Danforth Plant Science Center, St. Louis, MO*

TP 368 **Identification of PRSS11 Candidate Substrates through Proteomic Analysis**; Lin Liu; Ying Huang; Zhiyong Yang; Wei Liu; Eunice Wang; Carl Flannery; Margot O'Toole; Yongchang Qiu; *Wyeth, Cambridge, MA*

TP 369 **Top Down Protein Sequencing using an Electrospray Chip Coupled to an Ion Mobility / Time-of-Flight Mass Spectrometer**; Therese McKenna[1]; Christopher Hughes[1]; Mark Baumert[2]; Mark Allen[2]; James Langridge[1]; *[1]Waters Corporation, Manchester, United Kingdom; [2]Advion BioSciences, Norwich, United Kingdom*

TP 370 **Bath Gas Pressure Effects on the Charge State Distribution of Disulfide Reduced Proteins**; Brittany Butler; Gary L. Glish; *The University of North Carolina at Chapel Hill, Chapel Hill, NC*

TP 371 **A Novel Mass Defect Labeled Mass-Spectrometry Identifiable Cross-Linker**; Lisabeth L. Hoffman; Ryan M. Phillips; George F. Majetich; I. Jonathan Amster; *University of Georgia, Athens, GA*

PROTEINS: GLYCOPROTEINS I

TP 372 **Different Proteomic Approaches to Analysis of *Francisella tularensis* Bacterial Glycoproteins**; Lenka Hernychova[1]; Lucie Balonova[2]; Zuzana Bilkova[2]; Iveta Klouckova[3]; Lucie Markova[1]; Ivona Pavkova[1]; Yehia Mechref[4]; Milos V. Novotny[4]; Jiri Stulik[1]; *[1]University of Defence, Hradec Kralove, Czech Republic; [2]University of Pardubice, Pardubice, Czech Republic; [3]Indiana University, Bloomington, IN; [4]National Center of Glycomics and Glycoproteomics, Bloomington, IN*

TP 373 **O-Linked Protein Glycosylations in Plasma as Biomarkers for Epithelial Ovarian Cancer**; Taufika Islam Williams[1]; Jason S. Sampson[1]; Adam M. Hawkridge[1]; William A. Cliby[2]; David C. Muddiman[1]; *[1]North Carolina State University, Raleigh, NC; [2]Mayo Clinic, Rochester, MN*

TP 374 ***In vivo* Metabolic Labeling and Detection of Specific Glycoprotein Subclasses in Her2/neu Mouse Mammary Tumors**; Brian Agnew[1]; Tamara Nyberg[1]; Courtenay Hart[1]; Rajkumar Lakshmanaswamy[2]; *[1]Molecular Probes / Invitrogen, Eugene, OR; [2]Texas University Health Sciences Center, El Paso, Texas*

TP 375 **Determination of Glycosylation Profiles of Major Secreted Proteins of Cancer Cell Lines**; Mathur Rajesh; Lalita A. Shevde; Rajeev S. Samant; Lewis K. Pannell; *Mitchell Cancer Institute, Univ. of South Alabama, Mobile, AL*

TP 376 **Glycan Analysis of Human Podoplanin using MALDI TOF and MALDI QIT-TOF Mass Spectrometers**; Akihiko Kameyama; Mika Kato Kaneko; Yukinari Kato; Kahori Tachibana; Hiromi Ito; Hisashi Narimatsu; *National Institute of Advanced Industrial Science, Tsukuba, JAPAN*

TP 377 **Characterization of the Fc?RIIIa Carbohydrate Structure using LC-nanoESI-MS/MS with Parallel MS Triggered Fraction Collection and Subsequent Analysis of Glycopeptide Fractions**; Anne Zeck[1]; Gottfried Pohlentz[2]; Tilman Schlothauer[1]; Stefan Seeber[1]; Jasna Peter-Katalinic[2]; Jörg Thomas Regula[1]; *[1]Roche Diagnostics GmbH, Penzberg, Germany; [2]Westfalische-Wilhelms Universitat Munster, Muenster, Germany*

TP 378 **Discovery of Disease Marker by Direct LC-MS/MS Peptide Analysis to Profile Serum N-Glycoproteomes of Patients and Normal Controls**; Shwu-Bin Lin; Wei-Chien Tang; Tin-Yu Lin; Ming-Yang Lai; Ding-Shinn Chen; *National Taiwan University, Taipei, Taiwan, R.O.C.*

TP 379 **Quantitative Analysis of Tumor Proteins in Plasma**; Yuan Tian; Hui Zhang; *Johns Hopkins School of Medicine, Baltimore, MD*

TP 380 **Identification of Cell Surface Markers to Differentiate Endothelial and Fibroblast Cells using Lectin Arrays and LC/ESI/MS-MS**; Jieun Lee[1]; Shama P. Mirza[2]; Daniela N. Didier[2]; Mark Scalf[1]; Andrew S. Greene[2]; Michael Olivier[2]; Lloyd M. Smith[1]; *[1]University of Wisconsin-Madison, Madison, WI; [2]Medical College of Wisconsin, Milwaukee, WI*

TP 381 **The O-GlcNAc Proteome of Human Erythrocyte**; Zihao Wang; Kyoungsook Park; Greald W. Hart; *Johns Hopkins University School of Medicine, Baltimore, MD*

TP 382 **Comprehensive Analysis of Platelet Proteins Focusing on Membrane Glycoproteins and Glycosylation Site Analysis**; Urs Lewandrowski[1]; René Peiman Zahedi[1]; Jan Moebius[1]; Ulrich Walter[2]; Albert Sickmann[1]; *[1]Rudolf-Virchow-Center, University Würzburg, Würzburg, Germany; [2]IZKF, University Würzburg, Würzburg, Germany*

TP 383 **Temporal Variations in the Human Milk Glycoproteome**; John Froehlich; Eric Dodds; Erica McJimpsey; Richard Seipert; Hyun Joo An; Carlito Lebrilla; *UC Davis, Davis, CA*

TP 384 **Glycosylation Site-Specific Characterization of a HIV Vaccine Candidate, CON-S gp140ΔCFI, a Glycoprotein with 31 Potential Glycosylation Sites**; Janet Irungu[1]; Eden P. Go[1]; Ying Zhang[1]; Dilusha S. Dalpathado[1]; Hua-Xin Liao[2]; Barton F. Haynes[2]; Heather Desaire[1]; *[1]University of Kansas, Lawrence, KS; [2]Duke University medical center, Durham, NC*

TP 385 **Characterizing the Flagellin Glycoprotein from *Clostridium botulinum*: Identifying the Sites of Glycosylation using Electron Transfer Dissociation**; John F. Kelly[1]; Susan Twine[1]; Susan Logan[1]; James Mullen[1]; Catherine Paul[2]; John Austin[2]; Yingying Huang[3]; *[1]NRC Institute for Biological Sciences, Ottawa, Canada; [2]Bureau of Microbial Hazards, Health Canada, Ottawa, Canada; [3]Thermo Fischer Scientific, San Jose, CA*

TP 386 **Mass Spectrometric Elucidation of N-Glycosylation to the Light Chain of a Crystallizing Cryoglobulin**; Masaki Yamada[1]; Megumi Nakamura[2]; Ryo Hashimoto[3]; Mayumi Mori[3]; Tomohiro Torii[4]; Kazuhiro Ikenaka[4]; Tosifusa Toda[2]; *[1]Life Science Laboratory, Shimadzu Corporation, kyoto, Japan; [2]Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan; [3]Tokyo Metropolitan Geriatric Hospital, Tokyo, Japan; [4]National Institute for Physiological Sciences, Okazaki, Japan*

TUESDAY POSTERS

TP 387 **A Structural and Functional Analysis of Glycoproteins with Modified Glycosylation**; Melinda L. Toumi; Eden P. Go; Heather Desaire; *University of Kansas, Lawrence, KS*

TP 388 **Relative Quantitation of Glycopeptides Secreted by a Glioblastoma Cell Line in Response to cAMP**; Jennifer J. Hill; Jean C.Y. Lam; Maria J. Moreno; John F. Kelly; *National Research Council Canada, Ottawa, ON, Canada*

TP 389 **FT-ICR MS Accurate Mass Profiles of IgA1 Hinge Region *O*-Glycosylation Isoforms**; Stephanie B. Wall; Stacy Hall; Bruce A. Julian; Jiri Mestecky; Jan Novak; Matthew B. Renfrow; *University of Alabama at Birmingham, Birmingham, AL*

TP 390 **Glycosylation Profiling of IL-23: Determination of N-Glycosylation Sites and Structure Characterization of the Oligosaccharides by Mass Spectrometry**; Yan-Hui Liu; Brian Beyer; Peter Orth; Richard Ingram; Birendra N. Pramanik; *Schering Plough Research Institute, Kenilworth, NJ*

TP 391 **Dissociation of Core α1,6- and Antenna α1,3-Fucosylated Isomers in the MS of Glycopeptides**; Michiko Tajiri[1]; Yoshinao Wada[2]; *[1]CREST, JST, Kawaguchi, Saitama, JAPAN; [2]Osaka MCHRI, Izumi, Osaka, Japan*

TP 392 **Glycomic Profiling of the NCI-60 Cancer Cell Panel**; John A. Goetz[1]; Yehia Mechref[1]; Milos V. Novotny[1]; *[1]Indiana University Dept. of Chemistry, Bloomington, IN; [2]National Center of Glycomics and Glycoproteomics, Bloomington, IN*

TP 393 **Profiling of Lectin-Enriched Glycoproteins from Healthy Individuals and Stage III Breast Cancer Patients**; Iveta Klouckova[1]; Milan Madera[2]; Benjamin Mann[1]; Yehia Mechref[3]; Milos Novotny[2]; *[1]Indiana University, Bloomington, IN; [2]National Center of Glycomics and Glycoproteomic, Bloomington, Indiana; [3]METACyt Biochemical Analysis Center, Bloomington, Indiana*

TP 394 **Automated LC-MALDI Analysis of Glycopeptides from Recombinant Human Integrin**; Anja Resemann[1]; Arndt Asperger[1]; Kerstin Seemann[2]; Thomas Eichhorn[2]; Christian Hunzinger[2]; Katrin Sparbier[1]; Lars Vorwerg[1]; Günter Stein[1]; Detlev Suckau[1]; *[1]Bruker Daltonics, Bremen, Germany; [2]Merck KgaA, Darmstadt, Germany*

TP 395 **Identification and Analysis of S-Layer Proteins from Methanosarcina Acetivorans and Methanosarcina mazei**; Deborah Leon-Rossell; Kim Unmi; Yanan Yang; Joseph A. Loo; Robert P. Gunsalus; Rachel Ogorzalek Loo; *UCLA, Los Angeles, CA*

TP 396 **Further LC-MS/MS Characterization of Sites of O-GlcNAc Modification within the C-Terminus of Insulin Receptor Substrate-1 (IRS-1) and their Biological Relevance**; Lauren E. Ball; Mary N. Berkaw; Katherine A. Robinson; Maria G. Buse; *Medical University of South Carolina, Charleston, SC*

PROTEINS: MODIFIED II

TP 397 **Studies of Modifications of Cysteine 34 on Human Serum Albumin**; Jianzhong Chen[1]; Xiaoting Tang[1]; Yvonne Carella[2]; Hollie Huff[2]; James E. Bruce[1]; *[1]Washington State University, Pullman, WA; [2]Inverness Medical Innovations, Inc., Louisville, CO*

TP 398 **Investigation of Protein Sequence Variants in a Natural Microbial Community by Top-Down Proteomics**; Brian Erickson[1]; Mark Lefsrud[1]; Nathan VerBerkmoes[1]; Steven Singer[2]; Michael Thelen[2]; Jillian Banfield[3]; Robert Hettich[1]; *[1]Oak Ridge National Laboratory, Oak Ridge, TN; [2]Lawerence Livermore Natl. Lab, Livermore, CA; [3]Unversity of California, Berkeley, CA*

TP 399 **Characterization of the Extracellular Domain of Recombinant Human EMMPRIN**; Eric Beil; Yi Tang; Sheng-Jiun Sam Wu; Mark Cunningham; Juliane Mills; Bethany Swencki-Underwood; Alison Rogers; Jennifer F. Nemeth; *Centocor, Inc. a Johnson and Johnson Subsidiary, Radnor, PA*

TP 400 **Oxidation of DNA-Binding Proteins: from Damage to Loss of Function;** Corinne Buré[1]; Nathalie Gillard[1]; Stephane Goffinont[1]; Marie Davidkova[2]; Françoise Culard[1]; Melanie Spotheim-Maurizot[1]; Martine Cadene[1]; *[1]Centre de Biophysique Moleculaire CNRS UPR4301, Orleans, France; [2]Nuclear Physics Institute, Prague, Czech Republic*

TP 401 **Automated Precursor Ion Scan Identification of Protein Cabonylation Sites on a Hybrid Triple Quadrupole Linear Ion Trap Mass Spectrometer**; Shannon M Eliuk; Matthew B Renfrow; Ray Moore; Stephen Barnes; Helen Kim; *University of Alabama at Birmingham, Birmingham, AL*

TP 402 **Identification of 2-Amino Adipic Acid as an Oxidation Product of Lysine by Leukocyte Heme-Peroxidases *in vivo* via LC MS/MS Analysis**; Zhiping Wu; Zeneng Wang; Stanley L. Hazen; *Cleveland Clinic Foundation, Cleveland, OH*

TP 403 **Evaluation of the Effect of Sample Composition and Sample Load on the Mass Spectrometric Analysis of Immunoconjugates**; Alex Lazar; Rajesh Krishnamurthy; *Immunogen, Cambridge, MA*

TP 404 **LC-MS/MS Identification of Redox-dependent Formation of Disulfide Bonds in Recombinant Replication Protein A *in vitro***; Lijie Men; Yinsheng Wang; *University of California, Riverside, Riverside, CA*

TP 405 **Using MALDI-MS to Identify Novel Chromosomal-Binding Sites for a Chromatin-organizing Protein**; Heather Lavender; Alan J. Tackett; *University of Arkansas for Medical Sciences, Little Rock, AR*

TP 406 **Identification of Oxidant-induced Post-translational Modifications of GAPDH in Endothelial Cells using 2D-PAGE and Mass Spectrometry**; Mahadevan Sethuraman; David H. Perlman; Chaomei Shi; Mark E. McComb; Catherine E. Costello; Richard A. Cohen; *Boston University Sch of Medicine, Boston, MA*

TP 407 **Detection and Characterization of Immunoglobulin Light Chain Posttranslational Modifications using LCMS/MS-MS**; Roger Theberge[1]; Yan Jiang[1]; Mark E McComb[1]; Tatiana Prokaeva[2]; Lawreen H Connors[2]; Martha Skinner[2]; David C Seldin[2]; Catherine E Costello[1]; *[1]Boston University School of Medicine, Mass Spectro, Boston, MA; [2]Boston University School of Medicine, Boston, MA*

TP 408 **LC/MS Characterization of Common Chemical Degradation Products of *E. coli* Expressed Human IgG1 Fc**; Da Ren; Jane Dankberg; Yan Zhou; Robert Rosenfeld; Luke Li; Liang-Yu Shih; Pavel V. Bondarenko; Richard L. Remmele, Jr; Dingjiang Liu; *Amgen Inc, thousand oaks, CA*

TP 409 **AP180 is Multiply Phosphorylated and Has a Novel Post-Translational Modification: N-Acetylglucosamine Phosphorylation;** Mark E. Graham[1]; George E. Craft[1]; Nicolai Bache[2]; Martin R. Larsen[2]; Phillip J. Robinson[1]; *[1]Children's Medical Research Institute, Westmead, Australia; [2]University of Southern Denmark, Odense, Denmark*

TP 410 **Comprehensive Profiling of Unnatural Amino Acid Containing Protein Mutants**; Ansgar Brock[1]; Shawn Cheng[2]; Peter G. Schultz[2]; *[1]Genomics Institute of Novartis, San Diego, CA; [2]The Scripps Research Institute, San Diego, CA*

TP 411 **Characterizing the α,β-Unsaturated Aldehyde Acrolein's Role in the Covalent Cross-Linking of Proteins and Peptides using Proteomics**; Lewis C Jackson; Bert C Lynn; *University of Kentucky, Lexington, KY*

TUESDAY POSTERS

TP 412 **LC-FT-MS Determination of Deamidation**; Carol E. Parker[1]; Ryan Danelle[2]; Linhong Jing[1]; Maria E. Warren[1]; Cameron O. Scarlett[1]; Li Zhou[1]; Xian Chen[1]; *[1]University of North Carolina, Chapel Hill, NC; [2]Danell Consulting, Greenville, NC*

TP 413 **Characterization of Immunoconjugates of a Novel Antineoplastic Drug with Herceptin using Nanospray Mass Spectrometry;** John Roboz[1]; Sool Yeon Cho[1]; Stanley C. Bell[2]; Glenn J. Fegley[2]; Jodie L. Duke[2]; Stephen Cosenza[3]; James F. Holland[1]; *[1]Mount Sinai School of Medicine, New York, NY; [2]Onconova Therapeutics Inc., Lawrenceville, NJ; [3]Temple University School of Medicine, Philadelphia, PA*

TP 414 **Characterization of Xenobiotic Modification Products of Haemoglobin by Nano-Electrospray Tandem Mass Spectrometry**; Antti Hesso[1]; Jarkko Tornaeus[1]; Vladimir Havlicek[2]; *[1]Finnish Institute of Occupational Health, Helsinki, Finland; [2]Institute of Microbiology, Prague, Czech Republic*

TP 415 **Probing the Conformation and Activity of Trypsin by Amidination Labeling**; Xiaohui Liu; William C. Broshears; James P. Reilly; *Indiana University, Bloomington, IN*

PROTEINS: RECOMBINANT

TP 416 **Rapid Characterization of Variable Regions of Monoclonal Antibodies by Top-Down Mass Spectrometry**; Zhongqi Zhang; Bhavana Shah; *Amgen, Inc., Thousand Oaks, CA*

TP 417 **The Comparison of Biopharmaceutical and Follow-On Protein Drugs using Extended Range Proteomic Analysis**; Xiaoyang Zheng; Shiaw-lin Wu; Haitao Jiang; Barry L. Karger; William S. Hancock; *Northeastern University, Boston, MA*

TP 418 **Top-down Characterization of Therapeutic Antibody by High Resolution LTQ Orbitrap Mass Spectrometry**; Jennifer Zhang; Viswanatham Katta; *Genentech Inc., South San Francisco, CA*

TP 419 **Structural Characterization of the Extracellular Domain of a Recombinant Human Toll-Like Receptor 3 (TLR3) Protein**; Steven C Pomerantz; Ken Dixon; Juliane Mills; Joe Vennarini; Mark Cunningham; Jennifer F. Nemeth; *Centocor Research and Development, Radnor, PA*

TP 420 **Characterization of Recombinant Proteins by Offgel Electrophoresis Fractionation and LC/MS/MS Techniques**; Patrick D. Perkins; Ning Tang; Christine A. Miller; David M. Horn; Xiang-Dong Li; *Agilent Technologies, Santa Clara, CA*

TP 421 **Identification of Novoseven from Rat Liver Hepatocytes**; Thomas N. Krogh[1]; Torben Seested Johansen[2]; *[1]Protein Science, Novo Nordisk A/S, DK-2760 Måløv, Denmark; [2]Exploratory ADME, Novo Nordisk A/S, DK-2760 Måløv, Denmark*

TP 422 **Microwave-Assisted Enzymatic Digestion for Rapid Identification of Therapeutic Proteins by Peptide Mass Fingerprinting**; Mary Zhu; Viswanatham Katta; *Genentech, Inc., South San Francisco, CA*

TP 423 **"High-Throughput" Antibody Primary Sequence Confirmation via Nano-LC/MS/MS and Various Protein Identification Algorithms**; Peng Pan; Michelle Busch; Xiaoying Jin; Kate Zhang; *Genzyme Corporation, Framingham, MA*

TP 424 **Cysteine Connectivity in IgG2 Subclass. Complete Determination of the Disulfide Structures of ABX-EGF**; Theresa Martinez[1]; Amy Guo [1]; Mei Han[1]; Jay Jones[2]; Ron Gillespie[1]; Martin Allen[1]; Yuling Zhang[1]; Alain Balland[1]; *[1]Amgen, Seattle, WA; [2]Seattle Genetics, Seattle, WA*

TP 425 **Impurity Characterization in Recombinant Anthrax Protective Antigen In-Process Pools by LC/MS/MS**; Geoffrey K Yeh; *Vaxgen, South San Francisco, CA*

TP 426 **Long term Stability of Erbitux®, Methionine Oxidation in Stressed and Unstressed Samples**; JAY CHARLEBOIS; Tun Liu; Ann Daus; Qinwei Zhou; *ImClone Systems Incorporated, Branchburg, NJ*

TP 427 **Monitoring Modifications to Monoclonal Antibodies in Serum using a Novel Immunoprecipitation Method**; Katherine Lancaster; Viswanatham Katta; *Genentech, South San Francisco, CA*

TP 428 **Antigen Characterization using Mass Spectrometry: A Path to Developing a Better Antibody in the Biopharmaceutical Industry Setting**; Jennifer F. Nemeth; Eric J. Beil; Steven C Pomerantz; *Centocor R&D, Radnor, PA*

TP 429 **The Molecular Interaction between Human Chorionic Gonadotropin and the Luteinizing Hormone Receptor Investigated by Mass Spectrometry and Molecular Modeling**; Yongsheng Li; Ron Orlando; David Puett; *University of Georgia, Athens, GA*

TP 430 **Automated Top-Down and Bottom-Up Sequencing of Monoclonal Antibodies**; Gary A. Schultz[1]; Jason C. Rouse[2]; Joseph E. McClellan[2]; *[1]Advion BioSystems, Ithaca, NY; [2]Wyeth BioPharma, Andover, MA*

TP 431 **Identification and Quantitation of Isomerization and Cleavage in the Aspartate-Aspartate Motif in a Monoclonal Antibody by LC/MS and MALDI-TOF Analysis**; Gang Xiao; Pavel Bondarenko; *Amgen, Thousand Oaks, CA*

TP 432 **Direct Liquid Chromatography-Mass Spectrometry Quantitation of Proteins Expressed using Pooled ORF Expression Technology (POET)**; William K. Gillette; Dominic Esposito; Timothy D. Veenstra; James L. Hartley; *SAIC-Frederick, Frederick, MD*

TP 433 **Identification of Hinge Region Fragmentation in HIC and SEC Column Fractions of an IgG4 Antibody**; Vida Pezeshk; Zhirui Lian; *Eli lilly, Indianapolis, IN*

PROTEOMICS: BIOMARKERS II

TP 434 **Quantitative Proteome Analysis of an A53T a-Synuclein Drosophila Model of Parkinson's Disease**; Zhiyin Xun; Renã A. Sowell; Thomas C. Kaufman; David E. Clemmer; *Indiana University Bloominton, Bloomington, IN*

TP 435 **The Mass Spectrometric Detection of Schistosomiasis Infections from an Endemic Region**; Adam Rainczuk[1]; A Thiam[1]; Brian J Ward[1]; Momar Ndao[1]; David Blank[2]; Hugh PJ Bennett[3]; Bernard F Gibbs[3]; *[1]Centre for Parasitology McGill U, Montreal, Canada; [2]Royal Victoria Hospital, MUHC, Montreal, Canada; [3]Sheldon Biotechnology Center, McGill University, Montreal, Canada*

TP 436 **Detection of Differentially Expressed Proteins in Mouse Embryonic Stem Cells (mESCs) using a Micro Liquid Proteomics Approach**; Katherine E. Hersberger; Dang Vu-Phan; Maria Morell; Robert Hinderer; David E. Misek; K. Sue O'Shea; David M. Lubman; *University of Michigan, Ann Arbor, MI*

TP 437 **A New Method for Generating Quantitative and Reproducible Assay Data using Laser Desorption/Ionization Mass Spectrometry**; Fiona Plows[1]; Lee O Lomas[2]; Vanitha Thulasiraman[1]; Egisto Boschetti[1]; *[1]Bio-Rad, Fremont, CA; [2]Ciphergen Biosystems, Fremont, CA*

TP 438 **Simultaneous Quantitation of Four Amyloid β Peptides in Human CSF**; Eddie Takahashi; Anita Howe; Ole Vesterqvist; Zhaosheng Lin; *Wyeth Research, Collegeville, PA*

TUESDAY POSTERS

TP 439 **Standardization of MALDI-TOF Mass Spectrometry Based Proteomic Profiling**; Thomas Elssner[1]; Sven Baumann[2]; Dagmar Niemeyer[3]; Martin Fiedler[2]; Uta Ceglarek[2]; Joachim Thiery[2]; Markus Kostrzewa[1]; *[1]Bruker Daltonik GmbH, L, Leipzig, Germany; [2]Institute of Laboratory Medicine, Leipzig, Germany; [3]Bruker Daltonik GmbH, HB, Bremen, Germany*

TP 440 **SAMDI-TOF Mass Spectrometry for Clinical Diagnostics**; Steven M. Patrie; Milan Mrksich; *University of Chicago, Chicago, IL*

TP 441 **Verification of Potential Protein Biomarkers Identified from Conditioned Media in Lung Cancer Sera with an Antibody-Based MRM Approach**; Mark Han; Gordon Nicol; Aiqun Li; Charles Birse; Anh Nguyen; Mehdi Mesri; James Duff; David Parmalee; Erin Brand; William Fitzhugh; Jun Kim; Patrick Kaminker; Paul Moore; Steven M. Ruben; Tao He; *Celera, Rockville, MD*

TP 442 **Enhanced Protein Detection in Metastatic Melanoma Tissue by MALDI MS**; William Hardesty; Mark C. Kelley; Stephen E. Mason; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 443 **Brain Injury Biomarker Discovery via a Neuroproteomic Platform**; Andrew K. Ottens[1]; Liliana Bustamante[1]; Erin C. Golden[2]; Firas H. Kobeissy[1]; Ronald L. Hayes[2]; Frank C. Tortella[3]; Kevin K. W. Wang[1]; Jitendra R. Dave[3]; *[1]Psychiatry and Neuroscience, University of Florida, Gainesville, FL; [2]Neuroscience Dept., University of Florida, Gainesville, FL; [3]Walter Reed Army Institute of Research, Silver Springs, MD*

TP 444 **Biomarker Discovery in Serum Samples from Babesia-Infected Individuals using 2D-DIGE and MALDI-MS**; Brian Ward[1]; Momar Ndao[1]; Peter J Krause[1]; Michael Edwards[1]; Mark Duncan[1]; Christine Straccini[1]; Terry Spithill[1]; Bernard F Gibbs[2]; *[1]Montreal General Hospital, Montreal, Canada; [2]Sheldon Biotechnology Center, McGill University, Montreal, Canada*

TP 445 **Differential Neuroproteomic Analysis of Contusive Spinal Cord Injury in Rats**; Anshu Chen; RangaswamyRao Ravikumar; Melanie L. McEwen; Joe E. Springer; *University of Kentucky, Lexington, KY*

TP 446 **Towards Stable Diagnostic Setups in Clinical Proteomics: Absolute Quantitation of Peptide Biomarkers using MALDI-TOF MS**; Daniel Baechle[1]; Katrin Sparbier[2]; Hassan Dihazi[3]; Sabine Blaschke[3]; Gerhard-Anton Mueller[3]; Thomas Flad[1]; Markus Kostrzewa[2]; *[1]Panatecs GmbH, Tuebingen, Germany; [2]Bruker Daltonik GmbH, Leipzig, Germany; [3]University Hospital Goettingen, Goettingen, Germany*

TP 447 **Assessing Proteome Distributions in Renal Tumor Margins by Profiling MS Reveals Aberrant Molecular Characteristics Outside of Histological Tumor Border**; Stacey R. Oppenheimer; Deming Mi; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 448 **MALDI –MS Profiling of Embryonic Chick Heart Morphological Markers**; Kevin L. Schey; Susana Comte-Walters; Leticia Reyes; Edward Krug; John Schwacke; *Medical Univ of South Carolina, Charleston, SC*

TP 449 **LC-MALDI Top-Down Profiling for Biomarker Detection and Identification**; Sven Brand[1]; Victor. G. Fursey[2]; Stephanie Hahner[1]; Detlef Suckau[1]; *[1]Bruker Daltonik GmbH, Bremen, Germany; [2]Bruker Daltonics Inc., Billerica, MA*

TP 450 **LTQ Orbitrap MS and MS-MS Analysis of "Intact" Small Acid Soluble proteins of *Bacillus anthracis* and *Bacillus cereus***; Elisangela R Castanha[1]; Tonya Pekar[2]; Karen Fox[1]; Alvin Fox[1]; *[1]University of South Carolina, Columbia, SC; [2]Thermo Fisher Scientific, San Jose, CA*

TP 451 **Label Free Quantitation of Plasma Proteins by LTQFT**; Kumar Kolli[1]; Richard Katenhusen[1]; David Kirchner[1]; Heather. L Patney[1]; Jamie Weyandt[1]; Amy Burke[1]; Mary J Haberkorn[1]; Richard J Mural[1]; Ellis Gitlin[2]; Darrell Ellsworth[1]; *[1]Windber Research Institute, Windber, PA; [2]GE Heathcare, Piscataway, NJ*

TP 452 **Diagnosis of Human Babesiosis using SELDI ProteinChip Technology**; Momar Ndao[1]; Peter J Krause[1]; Michael Edwards[1]; Mark Duncan[1]; Christine Straccini[1]; Terry Spithill[1]; Brian Ward[1]; Bernard F Gibbs[2]; *[1]Montreal General Hospital, Montreal, Canada; [2]Sheldon Biotechnology Center, McGill University, Montreal, Canada*

TP 453 **MALDI-MS Profiling to Determine Prognostic Indicators of Chemotherapy Response**; Erin H. Seeley; Joshua A. Bauser; Deming Mi; Nara De Matos Grania; Kimberly Johnson; Jennifer A Pietenpol; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 454 **Comparative Glycoproteomics for the Discovery of Potential Biomarkers for Prion Disease**; Xin Wei; Joshua Schmidt; Allen Herbst; Judd Aiken; Lingjun Li; *University of Wisconsin-Madison, Madison, WI*

TP 455 **Comparative Proteomic Analysis of Radiation-Induced Protein Changes in Mouse Lung Tissue: Fibrosis Sensitive *versus* Resistant Strains**; Xiaoping Ao; Mary A Davis; Ming Zhang; Theodore S Lawrence; David M Lubman; *University of Michigan Medical Center, Ann Arbor, MI*

TP 456 **Identification of DNA Damage Response Biomarkers by Regulated Interaction Domain Affinity Capture (RIDAC);** Jeremy S Myers[1]; Dan C Liebler[2]; *[1]Vanderbilt University Medical Center/AstraZeneca, Nashville, TN; [2]Vanderbilt University Medical Center, Nashville, TN*

TP 457 **Correlation of miRNA and SILAC Protein Expression in a Primary Cancer Cell Line**; Lisa Wenrich; Xiquan Liang; Mahbod R. Hajivandi; Brad Love; Christopher Adams; Marshall Pope; *Invitrogen, R & D, Carlsbad, CA*

TP 458 **Proteomic Identification and Quantitative Analysis of Protein Families in Cancer and Control Plasma using an Intact Protein Analysis System**; Sharon J. Pitteri; Vitor Faca; Hong Wang; Qing Zhang; Hiroyuki Katayama; Renee Ireton; Alexei Krasnoselsky; Lisa Newcomb; Kenneth Song; Doug Phanstiel; Veronika Glukhova; Jason Struthers; Matthew Fitzgibbon; Martin McIntosh; Samir Hanash; *Fred Hutchinson Cancer Research Center, Seattle, WA*

TP 459 **High-Throughput Biomarker Discovery in Prostate Cancer using MS-Based Quantitative Proteomic Profiling**; Yan Li; Daniel W. Chan; Hui Zhang; *Johns Hopkins University, Baltimore, MD*

TP 460 **Development of a Mass Spectrometry-Based Multiplex Assay for Cardiac Biomarkers**; Eugene Zhen; Michael Berna; Zhaoyan Jin; David Watson; Bradley Ackermann; John Hale; *Eli Lilly & company, Greenfield, IN*

TP 461 **Discovery of Protein Biomarkers of Type-1 Diabetes by LC-MALDI**; Robert Moulder[1]; Waltteri Hosia[1]; Mikko Katajamaa[1]; Arja Reinikainen[1]; Riitta Veijola[2]; Jorma Ilonen[3]; Mikael Knip[4]; Olli Simell[5]; Matej Oresic[6]; Riitta Lahesmaa[1]; *[1]Turku Centre for Biotechnology, Turku, Finland; [2]University of Oulu, Oulu , Finland; [3]University of Kuopio, Kuopio , Finland; [4]University of Helsinki/Tampere University Hospital, Helsinki/Tampere , Finland; [5]Turku University Central Hospital, Turku, Finland; [6]VTT Technical Research Centre of Finland, Espoo, Finland*

TP 462 **Comparative Proteomics for a Genetically Engineered Mouse Model of Huntington's Disease**; Xiaoyun Liu; Benjamin R. Miller; George V. Rebec; David E. Clemmer; *Indiana Univ., Bloomington, IN*

TUESDAY POSTERS

TP 463 ***In vivo* Quantitative Interactome Analysis of the Amyloid Precursor Protein by Time-CONtrolled Transcardiac Perfusion Crosslinking**; Yu Bai; Kelly Markham; Fusheng Chen; Rasanjala Weerasekera; Joel Watts; Patrick Horne; Yosuke Wakutani; Gerold Schmitt-Ulms; *CRND, University of Toronto, Toronto, Canada*

PROTEOMICS: FUNDAMENTAL STUDIES

TP 464 **Global Proteomic Analysis of Zebrafish Plasma;** I. Ramesh Babu[1]; Wolfram Goessling[2]; Leonard I. Zon[2]; John S. Wishnok[1]; Steven R. Tannenbaum[1]; *[1]Massachusetts Institute of Technology, Cambridge, MA; [2]Harvard Medical School, Boston, MA*

TP 465 **The Effect of MS/MS Fragment Ion Tolerance on Peptide Identification**; David M. Horn; Christine A. Miller; Bryan D. Miller; *Agilent Technologies, Santa Clara, CA*

TP 466 **Comprehensive Proteome Analysis of Breast Cancer Tissue by LC-ESI MS/MS Combined with Sequential Protein Precipitation and Solublization Methods**; Yan Gong; Nan Wang; Fang Wu; Liang Li; *Department of Chemistry, Edmonton, Canada*

TP 467 **Proteomic Shift to Arginine Metabolism during Carbon Starvation in *Lactococcus lactis***; Bart Weimer[1]; Dong Chen[1]; Lan-Szu Chou[2]; Yi Xie[3]; Bala Ganesan[1]; *[1]Center for Integrated Biosystems, Logan, UT; [2]Institute for Clinical and Experimental Pathology, Salt Lake City, Utah; [3]Johns Hopkins University, Baltimore, Maryland*

TP 468 **Characterization of Human Liver Peroxisomes by Mass Spectrometry-Based Protein Correlation Profiling**; Sebastian Wiese[1]; Thomas Gronemeyer[1]; Rob Ofman[2]; Martin Eisenacher[1]; Christian Stephan[1]; Heiko Hayen[3]; Juergen Nolte[3]; Ronald Wanders[2]; Helmut E Meyer[1]; Bettina Warscheid[1]; *[1]Medical Proteom-Center, Ruhr-University Bochum, Bochum, Germany; [2]University of Amsterdam, Amsterdam, Netherlands; [3]Institute for Analytical Sciences, Dortmund, Germany*

TP 469 ***In vitro* Pharmacoproteomic and Toxicoproteomic Study of a Novel Benzofuran Isolated from Onobrychis ebenoides in MCF-7 and DU-145 Cells**; Maria Halabalaki[1]; Theodoros Roumeliotis[2]; Xanthippi Alexi[3]; Panagiotis Zerefos[2]; Aggeliki Papadopoulou[2]; Antonia Vlahou[2]; Sophia Kossida[2]; Michael N. Alexis[3]; Alexios-Leandros Skaltsounis[1]; Spiros D. Garbis[2]; *[1]University of Athens, Pharmacognosy Laboratory, Athens, Greece; [2]Academy of Athens - Biomedical Foundation, Athens, Greece; [3]National Hellenic Research Foundation, Athens, Greece*

TP 470 **Proteomics Analysis of the Interactome of N-myc Downstream Regulated Gene 1 and its Interactions with the Androgen Response Program**; Lan Chun Tu; Xiaowei Yan; Leroy Hood; Biaoyang Lin; *Inst for Systems Biology, Seattle, WA*

TP 471 **Analysis of Peptides/ Proteins by Pressurized Planar Electrochromatography Coupled with Matrix-assisted Laser Desorption/ Ionization Time-of-flight Mass Spectrometry**; Linan Song; Mei Wang; Yang Wang; Bennett Rockney; Wanye F. Patton; *PerkinElmer Life and analytical sciences, Waltham, MA*

TP 472 **Enhancing the Dynamic Range for Proteomics Applications using Electrochemical/Electrospray Ionization (ECI/ESI) Mass Spectrometry**; Sonja Hess[2]; John Lloyd[1]; *[1]NIH, Bethesda, MD; [2]California Institute of Technology/ BI, Pasadena, CA*

TP 473 **Proteomic Analysis of the Striatum in a L-Dopa-Induced Dyskinetic Animal Model of Parkinson's Disease**; Marcus Svensson[1]; Birger Scholz[1]; Karl Sköld[1]; Henrik Alm[1]; Kim Kultima[1]; Maria Fälth[1]; Alan R. Crossman[2]; Erwan Bezard[3]; Per E. Andrén[1]; *[1]Uppsala University, Uppsala, Sweden; [2]University of Manchester, Manchester, United Kingdom; [3]University Victor Segalen, Bordeaux, France*

TP 474 **Detecting Self-Assembled Protein Microarrays by MALDI-TOF**; Mike Kimzey; *University of Arizona, Tucson, AZ*

TP 475 **All Proteomic Analyses are Created Equal, and Exhibit an Ion Density that Challenges Conventional Bottom-up LC/MS Analyses**; Scott J. Berger; Craig R. Dorschel; Jeffery C. Silva; Marc V. Gorenstein; Scott J. Geromanos; *Waters Corporation, Milford, MA*

TP 476 **Evidence-Based Protein Identification by LC-MS^3 Linear Ion Trap Mass Spectrometry**; Kiyonaga Fujii[1]; Tomoyo Nakano[2]; Fumihiko Usui[2]; Yasuhiko Bando[3]; Toshihide Nishimura[4]; Fuyuhiko Inagaki[1]; *[1]Hokkaido University, Sapporo, Japan; [2]AMR Inc., Tokyo, Japan; [3]Biosys Technologies Inc., Tokyo, Japan; [4]Tokyo Medical University, Tokyo, Japan*

TP 477 **An MS-compatible Multicompartmental Electrolyzer for Isoelectric Trapping Separations: the MSWIFT**; Stephanie M. Cologna; Peniel J. Lim; Gyula Vigh; William K. Russell; David H. Russell; *Texas A&M University, College Station, TX*

TP 478 **Monitoring Proteolytic Digestion using the Fluorophore Epicocconone;** Duncan Veal[1]; H-Yoon Choi[1]; Peter H Karuso[2]; *[1]FLUOROtechnics Pty Limited, Macquarie University, Australia; [2]Macquarie University, Sydney, Australia*

TP 479 **Exploring the Pichia Proteome in Pharmaceutical Product Development**; Charles Mitchell; Ilana S. Aldor; Lihua Huang; *Eli Lilly and Company, Indianapolis, IN*

TP 480 **New Developments in Proteomic for the Analysis of Art and Archaeological Materials**; Caroline Solazzo[1]; David Erhardt[2]; Elisabeth Martin[3]; Christian Rolando[1]; Caroline Tokarski[1]; *[1]Univ. des Science/Tech de Lille, Villeneuve d'Ascq, FRANCE; [2]Smithsonian's Museum Conservation Institute (MCI), Washington DC, DC; [3]Laboratoire de Recherche des Musées de France, Paris, France*

TP 481 **The Elucidation of Endoprotease Substrate Specificity by Mass Spectrometry with an On-Bead Peptide Substrate Library**; Nicolas A. Stewart[1]; Ajoy Basak[2]; Timothy D. Veenstra[1]; *[1]SAIC-Frederick, Frederick, MD; [2]Ottawa Health Research Institute, Ottawa, Canada*

PROTEOMICS: FUNDAMENTAL TECHNIQUE COMPARISON

TP 482 **Increasing the Throughput of Proteomic Analysis: Efficiently Feeding the Mass Spectrometer**; Richard C. Jones; Jason T. Taylor; Ricky D. Edmondson; *NCTR, Jefferson, AR*

TP 483 **Shotgun Proteomics of *Medicago truncatula* Culture Cells using Monolithic Capillary LC/MS/MS**; Mohamed Bedair; Zhentian Lei; Bonnie S. Watson; Lloyd W. Sumner; *Samuel Roberts Noble Foundation, Ardmore, OK*

TP 484 **Improving Protein Coverage in Small Volumes of Cerebrospinal Fluid by Combining Different Types of Mass Spectrometers**; Marcel P Stoop; Peter C Burgers; Lennard J M Dekker; Rogier Q Hintzen; Theo M Luider; *Erasmus University Medical Center, Rotterdam, the Netherlands*

TP 485 **Methods of Enrichment of LMW Fraction of Human Plasma for MALDI-TOF MS Profiling of Potential Biomarkers of Lung Cancer**; Valeriy E. Shevchenko; Natalia E. Arnotskaya; Oxana P. Trifonova; Valentina A. Yurchenko; David G. Zaridze; *N. N. Blokhin Russian Cancer Research Center, Moscow, Russian Federation*

TP 486 **Evaluation of Three Methods for Removal of Highly Abundant Human Plasma Proteins**; Hua Lin; Thomas A. Shaler; Jing Wang; Melissa Chen; Erika Price; Jaya Kothule;

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Sophia Chen; Christopher H Becker; *Biomarker Discovery Sciences, PPD, Inc., Menlo Park, CA*

TP 487 **sAnalysis of Membrane Proteome of Zebrafish Liver: Comparison of Protein Extraction Methods (SDS vs. ALS) for LC-MS/MS**; Fang Wu; Nan Wang; Yan Gong; Liang Li; *department of chemistry, university of alberta, edmonton, CANADA*

TP 488 **Determining the Optimal Method of Extracting Proteins from Urine for Proteomic Biomarker Discovery**; Richard S. Lee; Flavio Monigatti; Andrew Briscoe; Bogdan Budnik; Judith A.J. Steen; Michael R. Freeman; Hanno Steen; *Children's Hospital Boston, Harvard Medical School, Boston, MA*

TP 489 **Comparing Top-down Analysis of Antibody Fc, LC and Fd proteolytic fragments by LTQ-Orbitrap and Q-ToF Premier**; David Hambly; Himanshu S Gadgil; Leo Bonilla; *Amgen Inc., Seattle, WA*

TP 490 **Peptide Isoelectric Focusing Prefractionation Prior to nanoLC-MS is a Powerful Alternative to GeLC-MS for SILAC-Based Quantitative Proteomics**; Ravi Krovvidi[1]; Kay T Junghanns[2]; Burghardt Scheibe[2]; Gerhard Mittler[1]; *[1]Max Planck Institute of Immunobiology, Freiburg, Germany; [2]GE Healthcare Biosciences, Freiburg, Germany*

TP 491 **Assessment of Multi-dimensional Separation Techniques for High Throughput Shotgun Proteomic Workflows**; Jonathan Brock; Nancy Winters; Sarah Stuart; David Tabb; Daniel Liebler; *Vanderbilt University, Nashville, TN*

TP 492 **Comparison of Multiple Liquid Partition Chromatography to Fractionate Human Serum for LC-MALDI Mass Spectrometry and LC-ESI Tandem Mass Spectrometry**; Mike Mcdonell[1]; *[1]Bruker Daltonics, Delta, Canada; [2]Ryerson University, Toronto, Canada*

PROTEOMICS: NEW & IMPROVED METHODS II

TP 493 **A Novel Method of Improving Visualisation of Liquid Chromatography-Ion Mobility-Orthogonal Time-of-Flight Mass Spectrometry (LC-IMS-oaTOF-MS) of Complex Mixtures;** Jim Langridge[1]; Ian Ross[1]; Simon Baker[1]; Martin Green[1]; Chris Hughes[1]; Pam Donoghue[2]; Mike Dunn[2]; *[1]Waters Corporation, Manchester, United Kingdom; [2]UCD, Conway Institute, Dublin, Ireland*

TP 494 **N-terminal Proteomics : A Strategy Based on N-terminal Protein Derivatization and LC-MS-MS**; Sebastien Gallien[1]; Emmanuel Perrodou[2]; Christine Carapito[1]; Odile Lecompte[2]; Olivier Poch[2]; Christine Schaeffer[1]; Alain Van Dorsselaer[1]; *[1]IPHC-DSA, LSMBO, CNRS-ULP UMR 7178, Strasbourg, FRANCE; [2]IGBMC CNRS/INSERM/ULP, Illkirch, France*

TP 495 **Ultra-fast Separations of Peptides and Proteins using Large Pore, Sub-two Micron Columns**; Reno Nguyen; Scott Anderson; Ian Chappell; Wendy Luo; *Grace Davison, Deerfield, IL*

TP 496 **Anion and Cation Mixed-bed Ion-exchange for Enhanced Multidimensional Separations of Peptides and Phosphopeptides**; Akira Motoyama; Tao Xu; Cristian I. Ruse; James A. Wohlschlegel; John R. Yates, III; *The Scripps Research Institute, La Jolla, CA*

TP 497 **Development of a Universal Method for Selective Isolation of N-terminal Peptides from Proteins and their *de novo* Sequencing**; Daisuke Nakayama[1]; Minoru Yamaguchi[1]; Hiroki Kuyama[2]; Eiji Ando[1]; Taka-aki Okamura[3]; Takashi Nakazawa[4]; Osamu Nishimura[2]; Susumu Tsunasawa[1]; *[1]Life Science Laboratory, Shimadzu Corporation, Kyoto, Japan; [2]Institute for Protein Research, Osaka University, Suita, Japan; [3]Graduate School of Science, Osaka University, Toyonaka, Japan; [4]Department of Chemistry, Nara Women's University, Nara, Japan*

TP 498 **Evaluation of Chip Designs for Titanium Dioxide based Phosphopeptide Enrichment, Separation and Mass Spectrometric Detection**; Shabaz Mohammed[1]; Martijn Pinkse[1]; Joris Benschop[1]; Karsten Kraiczek[2]; Georges Gauthier[2]; Albert Heck[1]; *[1]University of Utrecht, utrecht, Netherlands; [2]Agilent Technologies, Waldbronn, Germany*

TP 499 **Scanning a Lower Mass Range to Improve Ion Scores and Sequence Coverage for Protein Identification**; Nedyalka Dicheva; Carol Parker; David Robinette; Mihaela Mocanu; Steven Young; Xian Chen; *UNC-Chapel Hill, Chapel Hill, NC*

TP 500 **High-Performance Multidimensional Separations for Proteomic Applications**; Brian F. Fuller[1]; Andrew K. Ottens[2]; *[1]IDP, University of Florida, Gainesville, FL; [2]Psychiatry and Neuroscience, University of Florida, Gainesville, FL*

TP 501 **Modifications to Botulinum Protease within Neurons**; Jon P. Degnore; Charles B. Shoemaker; Paula Nguyen; Michael Berne; *Tufts University, Boston, MA*

TP 502 **New Technology in Analyzing Membrane Proteomes: Comprehensive Shotgun Proteomic Analysis of Rat Postsynaptic Density using Chemical Hydrolysis Method**; Taehoon Lee[1]; Joseph Kwon[1]; Younyoung You[1]; Sang Hoon Ha[1]; Martin Blüggel[2]; Gerhard Körting[2]; Herbert Thiele[3]; *[1]SIGMOL, Pohang, South Korea; [2]Protagen, Dortmund, Germany; [3]Bruker Daltonik, Bremen, Germany*

TP 503 **Micro-proteome Analysis using Capillary Column in Multi-dimensional Separation;** Hyeyeung Kim; Rong Wu; Kathleen R. Cho; David Misek; David M. Lubman; *University of Michigan, Ann arbor, MI*

TP 504 **Bioaffinity Microscale Magnetic Reactor for Improved MS Analysis of Entire Protein Complex;** Lucie Korecka[1]; Barbora Jankovicova[1]; Lenka Hernychova[2]; Jana Krenkova[3]; Zuzana Bilkova[1]; *[1]University of Pardubice, Pardubice, Czech Republic; [2]Purkyne Military Medical Academy, Hradec Kralove, CZ; [3]Institute of Analytical Chemistry AS CZ, Brno, CZ*

TP 505 **C-Terminal Derivatization of Proteins via Hydrazides for Sequencing with MALDI-MS**; Takashi Nakazawa[1]; Minoru Yamaguchi[2]; Mariko Nakagawa[1]; Mutsumi Oka[1]; Chihiro Nakajima[1]; Hiroki Kuyama[3]; Eiji Ando[2]; Daisuke Nakayama[2]; Taka-aki Okamura[3]; Osamu Nishimura[2]; Susumu Tsunasawa[2]; *[1]Nara Women's University, Nara, Japan; [2]Shimadzu Corporation, Kyoto, Japan; [3]Osaka University, Osaka, Japan*

TP 506 **Gas-Phase MudPIT: µLC-FAIMS-MS/MS for Proteomics on an Ion Trap Mass Spectrometer**; Jesse Canterbury; Xianhua Yi; Michael J. MacCoss; *Univ of Washington, Genome Sciences, Seattle, WA*

TP 507 **Characterization of ß-catenin Complexes Associated with Cancer Metastasis by Nanoprobe-assisted Proteomic Appraoch**; An-kai Su[1]; Po-Chiao Lin[2]; Chun-Cheng Lin[2]; Yu-Ju Chen[1]; *[1]Institute of Chemisty, Academia Sinica, Taipei, Taiwan; [2]National Tsing Hua University, Taipei, Taiwan*

TP 508 **Durable MALDI Matrices for Exhaustive and Non-redundant Data Acquisition**; Petri Kouvonen; Garry Corthals; *University of Turku / Centre for Biotechnology, Turku, Finland*

TP 509 **A Novel Approach for the Development of a Reference System for Haemoglobin A2 Quantization Based ON Peptide Mapping using LC-MS**; Audrey Bednarczyk[1]; Dominique Roecklin[1]; Christine Schaeffer[1]; Alain Van Dorsselaer[1]; Donatella Caruso[2]; Emmanuelle Bissé[3]; Renata Paleari[2]; Andrea Mosca[2]; IFCC .[4]; *[1]IPHC-DSA, LSMBO, ULP, CNRS, Strasbourg, France; [2]University of Milano,*

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Milano, Italy; [3]University Hospital, Freiburg, Germany; [4]for IFCC Working Group on Standardization of HbA2

TP 510 **Microwave-Assisted Acid Hydrolysis Combined with MALDI MS for Studying Prion Structures**; Bela Reiz; Donovan Duggan; Bow Suriyamongkol; David S. Wishart; Liang Li; *University of Alberta, Edmonton, Canada*

TP 511 **Affinity Technique to Capture and Identify Arsenic Binding Protein**; Huiming Yan; X.Chris Le; *University of Alberta, Edmonton, Alberta, Canada*

TP 512 **Multidimensional Liquid Chromatography of Proteins using Monolithic IEX and RP Columns**; Evert-Jan Sneekes; Robert van Ling; Bas Dolman; Remco Swart; *Dionex Benelux, Amsterdam, The Netherlands*

TP 513 **Determination of Cysteine Redox Status of NADH Dehydrogenase in a Parkinson's Disease Mouse Model using a Optimized cICAT Approach;** Steven R. Danielson; Birgit Schilling; Rebeccah R. Riley; Bradford W. Gibson; Julie K. Andersen; *Buck Institute For Age Research, Novato, CA*

TP 514 **Poly co-(N-Isopropylacrylamide-Methacrylic Acid) (NIPAAM-MAA) Brush Polymer Surfaces for the Selective Capture of Proteins from Complex Mixtures**; Ganga Fernando; Venney Wong; Gary R. Kinsel; Daniel J. Dyer; Loraine van Waasbergen; *Southern Illinois University at Carbondale, Carbondale, IL*

PROTEOMICS: PHOSPHORYLATION

TP 515 **Robust Method for the Confident Location of Protein Phosphorylation Sites**; Nurhan Ozlu[1]; Dalila Bensadek[1]; Thomas Patterson[1]; Timothy Mitchison[2]; Hanno Steen[1]; Judith A.J. Steen[1]; *[1]Harvard Medical School and Children's Hospital, Boston, MA; [2]Harvard Medical School, Boston, MA*

TP 516 **Phosm – A Software Tool for Comprehensive and Concise Mapping of Protein Phosphorylation Sites**; Andreas Schlosser[1]; Jens Vanselow[2]; Achim Kramer[2]; *[1]Center for Systems Biology, ZBSA, Freiburg, Germany; [2]Laboratory of Chronobiology, Charité, Berlin, Germany*

TP 517 **Evaluation of the Sequence Specific Retention Time Calculator (SSRTCalc) for High-content Hypothesis-driven Phosphoproteomics by LC-MALDI-MS/MS**; Chi-Chi Chou[1]; Vincent C. Chen[2]; Hsin-Yu Hsieh[1]; Helene Perreault[2]; Kay-Hooi Khoo[1]; *[1]National Core Facilities for Proteomics Research, Academia Sinica, Taipei, TAIWAN; [2]University of Manitoba, Winnipeg, Manitoba,Canada*

TP 518 **Quantitative Analysis of Tyrosine Phosphorylation produced following Transactivation of the Epidermal Growth Factor Receptor (EGFR) by IGF-1**; Shi-jian Ding; Wei-Jun Qian; Opresko Lee; Rui Zhao; Aleksey V Tolmachev; Athena A Schepmoes; Matthew E. Monroe; Steven Wiley; David G. Camp II; Richard D. Smith; *Pacific Northwest National Lab, Richland, WA*

TP 519 **Time-Resolved Quantitative Phosphoproteomic Analysis of mast cell signaling**; Lulu Cao; *Brown University, Providence, RI*

TP 520 **Stable Isotope Phosphoprotein Affinity Tagging (SIPAT) Approach for Quantitation of Protein Phosphorylation Degree**; Yet-ran Chen[3]; Szu-Chiao Huang[2]; Yu-Ju Chen[1]; *[1]Academia Sinica, Taipei, Taiwan; [2]National Central University, Taoyuan, Taiwan; [3]National Taiwan Ocean University, Keelung, Taiwan*

TP 521 **Quantitative Analysis of Protein Expression and Phosphorylation Associated with Adipocyte Differentiation by Yin-Yang MDLC-MS/MS**; Su-Jun Li; Jie Dai; Yi-Bo Wu; Xing-Lin Yang; Jia-Rui Wu; Yi-Xue Li; Rong Zeng; *Shanghai Institutes for Biological Sciences, Shanghai, China*

TP 522 **Protein Phosphorylation Dynamics in Bacteria Investigated by SILAC and Quantitative Mass Spectrometry**; Boris Macek[1]; Boumediene Soufi[2]; Florian Gnad[1]; Ivan Mijakovic[2]; Matthias Mann[1]; *[1]MPI of Biochemistry, Martinsried, Germany; [2]Technical University of Denmark, Lyngby, Denmark*

TP 523 **Quantitative Analysis of the Insulin Signalling Cascade using SILAC**; Mark Larance[1]; Michael Guilhaus[2]; David James[1]; *[1]Garvan Institute of Medical Research, Sydney, Australia; [2]BMSF, University of New South Wales, Sydney, Australia*

TP 524 **Reference-facilitated Phosphoproteomics: Fast and Reliable Phosphopeptide Validation by Microlc-ESI-Q-TOF MS/MS**; Susumu Y. Imanishi; Vitaly Kochin; Saima E. Ferraris; Aurélie de Thonel; Hanna-Mari Pallari; Garry L. Corthals; John E. Eriksson; *Turku Centre for Biotechnology, Turku, Finland*

TP 525 **Quantitative Phosphoproteomics: High Sensitivity and Multiplexing using Two-Stage IMAC Enrichment, iTRAQ labeling, and Linear Ion Trap/PQD**; Wells W. Wu[1]; Guanghui Wang[1]; Terry Zhang[2]; Paul A. Insel[3]; Rong-Fong Shen[1]; *[1]Proteomics Core Facility, NHLBI, NIH, Bethesda, MD; [2]Thermo Fisher Scientific, San Jose, CA; [3]University of California, San Diego, La Jolla, CA*

TP 526 **Software Tool for Reference-Facilitated Phosphoproteomics**; Garry Corthals[1]; Mikko K. Katajamaa[3]; Susumu Y. Imanishi[2]; John E. Eriksson[2]; *[1]Turku Centre for Biotechnology, Turku, Finland; [2]Åbo Akademi University, Turku, Finland; [3]University of Turku, Turku , Finland*

PROTEOMICS: LOWER ORGANISMS

TP 527 **The Effect of Carbon Source on the *K. lactis* Secretome During Fermentation**; Jack S. Benner; Casey L. Swaim; Shamik Sharma; Brian Anton; Chris H. Taron; *New England Biolabs, Ipswich, MA*

TP 528 **Proteomic Characterization of the Facultative Psychrophile *Pedobacter cryoconitis* Based on both ^{15}N Metabolic Labeling and *de novo* Sequencing**; Ana G. Pereira-medrano[1]; Rosa Margesin[2]; Phillip C. Wright[1]; *[1]University of Sheffield, Sheffield, United Kingdom; [2]Universität Innsbruck, Innsbruck, Austria*

TP 529 **Environmental Proteomics of the OM43 Clade of Beta-proteobacteria in Oregon Coastal Seawater**; Paul E. Abraham[1]; Sarah M Sowell[2]; J.B. Kitner[2]; Mark G Lefsrud[1]; Manesh Shah[1]; Robert L. Hettich[1]; Nathan C. VerBerkmoes[1]; Steve J. Giovannoni[2]; *[1]Oak Ridge National Lab, Knoxville, TN; [2]Oregon State University, Corvallis, OR*

TP 530 **Analysis of *Neisseria gonorrhoeae* Metabolism by Label-Free Quantitative Proteomics**; Jinsam You[1]; Dalai Yan[2]; Kerry Bemis[1]; Tony Tegeler[1]; Mu Wang[1]; Jean-Pierre Wery[1]; *[1]INCAPS, Indianapolis, IN; [2]Indiana University School of Medicine, Indianapolis, IN*

TP 531 **Proteogenomics of a Natural Microbial Community Before and After a Putative Phage Infection Show Species and Functional Perturbations**; Nathan C. Verberkmoes[1]; Paul Wilmes[2]; Vincent J. Denef[2]; Mark Lefsrud[1]; Paul Abraham[1]; Manesh Shah[1]; Mya Breitbart[3]; Michael P. Thelen[4]; Jillian F. Banfield[2]; Robert L. Hettich[1]; *[1]Oak Ridge Nat'l Lab, Oak Ridge, TN; [2]University of California, Berkeley, Berkeley, CA; [3]University of South Florida, St. Petersburg, FL; [4]Lawrence Livermore National Laboratory, Livermore, CA*

TP 532 **Pox Virion Structure *via* Relative Quantitative Proteomics;** Paul D. Gershon[1]; Wayne Chou[1]; Nadi Wickramesekera[2]; Paula Traktman[2]; *[1]University of California, Irvine, Irvine, CA; [2]Medical College of Wisconsin, Milwaukee, WI*

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TP 533 **Comparative Proteomic Analysis of the *Brugia malayi* Life Cycle**; Zhaojing Meng[1]; Roshanak T. Semnani[2]; David A. Lucas[1]; King Chan[1]; Haleem J. Issaq[1]; Timothy D. Veenstra[1]; Thomas B. Nutman[2]; *[1]SAIC-Frederick, Frederick, MD; [2]NIAID, Bethesda, MD*

TP 534 **Proteomic Characterization of the Cyanobacteria Cyanothece 51142**; Jon M. Jacobs[1]; Eric A. Welsh[2]; Michelle Liberton[2]; Jana Stockel[2]; Carrie D. Nicora[1]; David G. Camp[1]; Himadri B. Pakrasi[2]; Richard D. Smith[1]; *[1]Pacific Northwest National Laboratory, Richland, WA; [2]Washington University, St. Louis, MO*

TP 535 **Mass Spectrometric Determination of the *N*- and *C*-termini of Zona Pellucida Glycoproteins from *X. laevis* Eggs**; Zhiguo Li[1]; Ruben T. Almaraz[2]; Jerry L. Hedrick[2]; Fan Xiang[3]; Andreas Franz[1]; *[1]Department of Chemistry, University of the Pacific, Stockton, CA; [2]Department of Animal Sciences, UC Davis, Davis, CA; [3]Shimadzu Biotech Corp., Pleasanton, CA*

TP 536 **Stable Isotope Labeling for Relative Protein Quantification in the Agronomically Important Filamentous Fungus *Aspergillus flavus***; D. Ryan Georgianna; David C. Muddiman; Gary A. Payne; *North Carolina State University, Raleigh, NC*

TP 537 **Proteomic Analysis of Oocyst Wall Proteins of Cryptosporidium parvum**; Tianmin Huang; Fayun Che; Hongshan Zhang; Carlos J. Madrid-Aliste; Qilie Luo; Edward Nieves; Kami Kim; Andras Fiser; Louis M. Weiss; Ruth Hogue Angeletti; *Albert Eistein College of Medicine, Bronx, NY*

TP 538 **Two Dimensional Gel Separation followed by ESI FT-ICR MS for Differential Membrane Proteome Analysis of *Borrelia burgdorferi***; Sudarslal Sadasivannair[1]; Sukanya Narasimhan[2]; Doris E Terry[3]; Mark R Emmett[1]; Carol L Nilsson[1]; Erol Fikrig[2]; Alan G Marshall[1]; *[1]National High Magnetic Field Laboratory, FSU, Tallahassee, FL; [2]Department of Medicine,Yale University, New Haven, CT; [3]College of Medicine, FSU, Tallahassee, FL*

TP 539 **Proteomic Investigation of the Hydrogen Producing Thermophilic Carboxydothermus Hydrogenoformans Grown with CO and Syngas**; David Reed; Joni Barnes; Cody Permann; Kastli Schaller; Vicki Thompson; *Idaho National Laboratory, Idaho Falls, ID*

TP 540 **Identification of Key Membrane Proteins and Concomitant Analysis of Lipid Signatures in ANAMMOX bacteria**; Roger Karlsson[1]; Anders Karlsson[2]; Ingela Lanekoff[1]; Anna Bredberg[1]; Ola Bäckman[1]; Stefan Hulth[1]; *[1]Göteborg University, Gothenburg, Sweden; [2]Nanoxis AB, Gothenburg, Sweden*

TP 541 **Antimicrobial Compounds Induced during the Immune Response of *Neobellieria bullata* larvae**; Miloslav Sanda[1]; Alice Ciencialova[1]; Josef Cvacka[1]; Vladimir Vrkoslav[1]; Radek Sindelka[2]; Bohumir Koutek[1]; *[1]Institute of Organic Chemistry and Biochemistry, Flemingovo n. 2 Prague 6, Czech Republic; [2]Institute of Molecular Genetics, Videnska 1083, Prague 4, Czech Republic*

TP 542 **Profiling a Bacterial Proteome under Different Growth Conditions: Challenges and Solutions to Differential Proteomic Analysis**; Lewis K. Pannell[1]; Aimee M. Tucker[2]; Nicolas Verneuil[2]; Robert Alecio[3]; Mary L. Blackburn[4]; David O. Wood[2]; *[1]Mitchell Cancer Institute, Univ South Alabama, Mobile, AL; [2]Department of Microbiology & Immunology, Mobile, AL; [3]Positive Probability Limited, Isleham, UK; [4]ThermoFisher Scientific, Somerset, NJ*

TP 543 **Proteome Analysis of *Aspergillus oryzae* for Precise Prediction of Protein Coding Regions and Protein Profiling**; Hanako Ataku; Miyako Mise; Keiko Nishijima; Jun Yamazaki; Kazumi Sasaki; Syuji Yamazaki; Nobuyuki Fujita; *National Institute of Technology and Evaluation, Tokyo, Japan*

TP 544 **Identification of *Staphylococcus aureus* Exoproteins by Two Dimensional Liquid Chromatography-Mass Spectrometry**; Shobha Ravipaty; Lindsay, E. Darling; James, P. Reilly; *Department of Chemistry, Indiana University, Bloomington, IN*

TP 545 **Microbial Proteome q-Value Cut-off Calibration for Quantitative Proteomics**; Tiansong "Tony" Wang; Qiangwei Xia; Murray Hackett; *University of Washington, Seattle, WA*

TP 546 **A Proteomics Investigation of Predicted Pathways in *Desulfovibrio vulgaris***; Alyssa M. Redding[1]; Aindrila Mukhopadhyay[1]; Sara Gaucher[1]; Marcin Joachimiak[1]; Dominique C. Joyner[1]; Jizhong Zhou[1]; Terry C. Hazen[1]; Jay D. Keasling[1]; *[1]Virtual Institute of Microbial Stress & Survival, Berkeley, CA; [2]UC Berkeley, Berkeley, CA; [3]Lawrence Berkeley National Laboratory, Berkeley, CA; [4]Sandia National Laboratory, Livermore, CA; [5]Oklahoma University, Norman, OK*

PROTEOMICS: MEDICAL II

TP 547 **Identification of eIF4E Transcription Factor Sensitivity Element mRNA-protein Interactions**; Katherine LB Borden[1]; Michael J Osborne[1]; Nadeem Siddiqui[1]; Laurent Volpon[1]; Ivan Topisirovic[1]; Mike Aguiar[2]; Bernard F Gibbs[2]; *[1]Dept. of Pathology and Cell Biology, U de Montreal, Montreal, Canada; [2]Sheldon Biotechnology Center, McGill University, Montreal, Canada*

TP 548 **Development of a Highly Sensitive High-throughput Mass Spectrometry-Based Assay for Rat Procollagen type-I N-Terminal Propeptide (PINP)**; Bomie Han[1]; Laura Hale[1]; Masahiko Sato[1]; Jinsam You[2]; Marci Copeland[2]; John Hale[1]; *[1]Eli Lilly and Co, Indianapolis, IN; [2]INCAPS, Indianapolis, IN*

TP 549 **Detection and Diagnosis of Genetic Disorders of Glycosylation using an MRM-Driven Targeted Approach on a Triple Quadrupole Linear Ion Trap**; Michelle L Colgrave[1]; Alun Jones[2]; Teresa Munce[3]; Francis G Bowling[3]; *[1]Applied Biosystems, Brisbane, Australia; [2]Institute for Molecular Bioscience, Brisbane, Australia; [3]Mater Children's Hospital, South Brisbane, Australia*

TP 550 **Immunoregulation of Transforming Growth Factor-β and Interleukin-6**; Fong-Wei You[1]; Chao-lin Liu[2]; Ya-ken Chen[1]; Jyp-Ping Tsai[3]; Hsin-Wei Chen[3]; Wei-Kang Wu[1]; Chia-rui Shen*[1]; *[1]Chang Gung University, Kwei-Shan, Tao-Yuan, Taiwan; [2]MingChi University of Technology, Taishan, Taipei, Taiwan; [3]National Health Research Institutes, Chunan, Hsinchu, Taiwan*

TP 551 **Bone Proteomics of Osteoporosis Patients using ITRAQ technology**; Patrik Onnerfjord; Dick Heinegård; *Lund University, Lund, Sweden*

TP 552 **Quantitative Proteomic Analysis of Diabetic Mouse Pancreatic Islets by iTraq and Mass Spectrometry**; Ying Yang; Hongfang Lu; Michael Wheeler; *University of Toronto, Toronto, ON, Canada*

TP 553 **Proteomic Analysis of the Human Endometrial Secretome**; Mihaela Mocanu[2]; Viorel Mocanu[2]; Nedyalka Dicheva[2]; Jessica Scotchie[1]; Marc Fritz[1]; Maria Warren[2]; Steven Young[1]; Carol Parker[2]; Xian Chen[2]; *[1]Obstetrics & Gynecology, UNC - Chapel Hill, Chapel Hill, NC; [2]UNC-Duke Proteomics Center, Chapel Hill, NC*

TP 554 **Classification of Calcium Oxalate, Phosphate and Brushite Kidney Stones by Protein Content**; LeeAnn Higgins[1]; Benjamin K. Canales[2]; Lorraine B. Anderson[2]; Joel W. Slaton [2]; Nathan W. Liu [2]; Ken P. Roberts[2]; Manoj Monga [2]; *[1]University of MN, St. Paul, MN; [2]University of Minnesota, Minneapolis, Minnesota*

TP 555 **Identification of Novel Proteins in Activated Human T cells that Drive Macrophage Activation and Cytokine Production**; Karen R. Jonscher; Li Li; Bjoern Schneidewinnd; Ling-Jia Hu; David Norris; Carl K. Edwards; *Univ. of CO Health Sciences Center, Denver, CO*

TP 556 **A Differential Proteome Analysis of Normal and Osteoarthritic Chondrocytes Points to Distortion of Vimentin Organisation in Osteoarthritis**; Stijn Lambrecht; Gust Verbruggen; Peter C.M. Verdonk; Dirk Elewaut; Dieter Deforce; *Ghent University, Gent, Belgium*

TP 557 **Quantitative Profiling of Bax-associated Proteins in Modulation of TRAIL-induced Apoptosis**; Peng Wang[1]; Andy Lo[1]; Raymond Lai[1]; Chunhai Hao[2]; Liang Li[1]; *[1]University of Alberta, Edmonton, Canada; [2]Emory University, Atlanta*

TP 558 **Secretome of Primary Cultures of Human Adipose-Derived Stem Cells (ASCs): Modulation of Serpins by Adipogenesis**; Indu Kheterpal[1]; Sanjin Zvonic[1]; Michael Lefevre[1]; Gail Kilroy[1]; Z. Elizabeth Floyd[1]; James P. DeLany[2]; Amy Gravois[1]; Angie White[1]; Xiying Wu[1]; Jeffrey M. Gimble[1]; *[1]Pennington Biomedical Research Center, Baton Rouge, LA; [2]University of Pittsburgh, Pittsburgh, PA*

TP 559 **The Application of Proteomics Methodology to Influenza Vaccine Formulations;** Terry D. Cyr; Diane Bertrand; Michel Girard; Virginia Garcia-Canas; Barry Lorbetskie; *Health Canada, Ottawa, Canada*

TP 560 **Comprehensive Proteomic Profiling of Placenta-Derived Adherent Cells (PDACs)**; Neerav D. Padliya[1]; Roger G. Biringer[2]; Christopher W. Lugo[1]; Hemlata Rana[1]; Mohit B. Bhatia[1]; Andreas F. R. Hühmer[2]; Wolfgang T. Hofgartner[1]; Robert J. Hariri[1]; *[1]Celgene Cellular Therapeutics, Summit, NJ; [2]Thermo Fisher Scientific, San Jose, CA*

TP 561 **Post-Translational Modifications in the Rat Lumbar Spinal Cord in Experimental Autoimmune Encephalomyelitis (EAE);** Jennifer E. Grant[1]; Jun Hu[1]; Tong Liu[1]; Mohit R. Jain[1]; Stella Elkabes[2]; Hong Li[1]; *[1]UMDNJ Medical School Cancer Center, Newark, NJ; [2]UMDNJ Neuroscience and VA Neurology Service, Newark, NJ*

TP 562 **Nitrotyrosine-containing Proteins in Diabetic Rat Retina and Müller Cells**; Xianquan Zhan[1]; Yunpeng Du[2]; John S. Crabb[1]; Timothy S. Kern[2]; John W. Crabb[1]; *[1]Cole Eye Institute, Cleveland Clinic Foundation, Cleveland, OH; [2]Department of Medicine,Case Western Reserve Univ., Cleveland, OH*

TP 563 **Mass Spectrometry Based Proteogenomic Characterization of the Human Gut Microflora from Crohn's Patients;** Alison Russell[1]; M. Rosenquist[2]; M.G. Lefsrud[1]; M. Shah[1]; L. Engstrand[3]; C. Tysk[4]; J. Halfvarsson[4]; N.C. VerBerkmoes[1]; R.L. Hettich[1]; J. Jansson[2]; *[1]Oak Ridge National Lab, Knoxville, TN; [2]Swedish University of Agriculture Sciences, Uppsala, Sweden; [3]Swedish Institute for Infectious Disease Control, Solna, Sweden; [4]Orebro University Hospital, Orebro, Sweden*

TP 564 **A Targeted Comparative Proteomic Approach for Identification of Phosphorylation Dependant Protein-Protein Interactions of α-Synuclein**; Melinda A. McFarland[1]; Christopher E. Ellis[1]; Sanford P. Markey[1]; Robert L. Nussbaum[2]; *[1]National Institute of Mental Health, NIH, Bethesda, MD; [2]Dept of Medicine,Division of Medical Genetics,UCSF, San Francisco, CA*

TP 565 **Quantitation of Dystrophin Protein in Muscle Biopsies from Patients with Muscular Dystrophy using Isotope-coded Affinity Tag Analysis**; Jung Yoon; Jerry Mendell; Paul T Martin; *Columbus Children's Research Institute, Columbus, OH*

PROTEOMICS: SAMPLE PREPARATION & METHODS (NON-GEL BASED)

TP 566 **Microfabricated Monolithic RP Column Arrays as the Fraction Collector for Offline First Dimension SCX Separation in 2D-LC-ESI-MS Proteomic Analysis**; Jian Liu; Daniel R. Knapp; *Medical University of South Carolina, Charleston, SC*

TP 567 **Optimization of LC/MS/MS and LC/LC/MS/MS for Plasma Proteomics**; Yan Wu; Carol E. Parker; Xian Chen; *University of North Carolina, Chapel Hill, NC*

TP 568 **The Detection of Protein Toxins in Food Matrices using Immunoaffinity in Combination with Mass Spectrometry**; John H. Callahan; Fenhong Song; Kevin Shefcheck; *FDA/CFSAN, College Park, MD*

TP 569 **Rapid and Quantitative Proteomic Analysis of Human Skin Biopsy Samples**; Erika P Parkinson[1]; Paul J Skipp[1]; Maja Aleksic[2]; Daniel J Scott[2]; Geraldine Clough[3]; C David O'Connor[1]; *[1]Centre for Proteomic Research, Univ of Southampton, Southampton, United Kingdom; [2]Safety & Enviromental Assurance Centre, Unilever, Bedford, United Kingdom; [3]School of Medicine, Univ of Southampton, Southampton, United Kingdom*

TP 570 **Recognizing Quaternary Structure during Global Proteomics**; Xiuping Liu; Fred Regnier; Qiang Gao; Wen-chu Yang; *Purdue University, West Lafayette, IN*

TP 571 **Utility of an Absolute Quantitation Method for Optimizing On-Column Protein Load in Qualitative and Quantitative Proteomics**; Craig A. Dorschel[1]; Jeffrey C. Silva[1]; Johannes P.C. Vissers[2]; Scott J. Geromanos[1]; Krisha Panchalingam[3]; Christopher Utzat[3]; James L. Sherley[3]; *[1]Waters Corporation, Milford, MA; [2]Waters Corporation, Manchester, United Kingdom; [3]Massachusetts Institute of Technology, Cambridge, MA*

TP 572 **Rapid Polypeptide Identification in Complex Biological Samples through Integration of Electrophoretic Fractionation, Reversed-Phase Capture and MALDI Analysis**; M. Lisa Manier; Hans-R. Aerni; Richard M. Caprioli; *Vanderbilt University, Nashville, TN*

TP 573 **Robust 2D HPLC Protocols for Functional Proteomics Sample Preparation**; Kerry Nugent; Eric Kemp; Lori Ann Upton; *Michrom Bioresources, Inc., Auburn, CA*

TP 574 **Using Polymeric Reverse Micelles to Obtain Highly Selective Fractionation of Peptides from Protein Digests for MALDI-MS Analysis**; Marianny Y. Combariza; Elamprakash Savariar; Sankaran Thayumanavan; Richard W. Vachet; *Chemistry Department, University of Massachusetts, Amherst, MA*

TP 575 **A Rapid and Simple Method for Identification of Metallothionein Isoforms in Cultured Human Prostate Cells by MALDI-TOF/TOF Mass Spectrometry**; Rongying Wang; Donald A. Sens; Amy Albrecht; Scott Garrett; Seema Somji; Mary Ann Sens; Xiaoning Lu; *University of North Dakota, GRAND FORKS, ND*

TP 576 **Protein Concentration and Tryptic Digestion at a pH Junction of Discontinuous Buffers using Capillary Electrophoresis for MALDI-MS analysis**; Chandra Nesbitt; Ken K.-C. Yeung; *University of Western Ontario, London, Canada*

TP 577 **Enabling SDS-Assisted Proteome Analysis by Tandem Column HPLC for Peptide Purification**; Nan Wang; Liang Li; *Department of Chemistry,University of Alberta, Edmonton, Canada*

TP 578 **Detection, Confirmation, and Quantification of Allergens in Chocolate using MALDI and LC/MS/MS**; Fenhong Song; Kevin Shefcheck; John H. Callahan; *FDA/CFSAN, College Park, MD*

TUESDAY POSTERS

TP 579 **Characterization of Liquid Chromatography Strategies to Separate Intact Proteins and its Application to Top-Down Proteomics**; Timothy S Collier; David C Muddiman; D. Keith Williams, Jr; Adam M Hawkridge; G. Ryan Georgianna; Gary A Payne; *North Carolina State University, Raleigh, NC*

TP 580 **Specific Isolation of Cys-containing Peptides from Yeast Cell Lysates;** Mark J. Raftery; *Cytokine Research Unit, Kensington, Australia*

TP 581 **Do You Think SCX Mode Is the Most Effective Ways as 1st Dimension of 2D-LC-MS/MS Analysis for Whole Tissue Proteomics?** Tatsuji Nakamura; Yoshiya Oda; Toshitaka Sato; Junro Kuromitsu; *Eisai Co., Ltd., Tsukuba, Japan*

TP 582 **A Three-Dimensional Proteomic Approach for the Study of Different Regions of the Rat Brain**; Kristi S. Rau[1]; Annette E. Fleckenstein[2]; Christina M. Markl[1]; Michael H. Simonian[1]; *[1]Beckman Coulter, Inc., Fullerton, CA; [2]University of Utah, Salt Lake City, UT*

TP 583 **Measuring Neuropeptides in the Brain: Postmortem Degradation of Endogenous Peptides**; Michael L Heien; Suresh Annangudi; Nathan Hatcher; Jonathan Sweedler; *University of Illinois, Urbana, IL*

WEDNESDAY POSTERS

AMBIENT IONIZATION II

WP 004 **Desorption Electrospray Ionization - Mass Spectrometry (DESI-MS): Analysis of Trace Organic Contaminants on Glass Substrates Intended for Optical Applications**; Rob Burkhalter; Liepin Huang; Masato Tomita; Krishna Nath; *Corning, Inc., Corning, NY*

WP 005 **Effect of Spray Plume Characteristics on Desorption and Ionization in DESI**; Sofie P. Pasilis; Vilmos Kertesz; Gary J. Van Berkel; *Oak Ridge National Laboratory, Oak Ridge , TN*

WP 006 **Mass Spectral Analysis of Vitamin D2 and D3 using Desorption Electrospray Ionization**; Dina Justes[1]; George Haas[2]; Gianluca Dimartino[2]; Carol Zrybko[2]; R. Graham Cooks[1]; *[1]Purdue University, West Lafayette, IN; [2]Kraft Foods Inc., Glenview, IL*

WP 007 **On-Probe Pyrolysis DESI-MS and Atmospheric Pressure Thermal Desorption-ESI-MS for the Analysis of Non-Volatile and Volatile Pyrolysis Products**; Franco Basile[1]; Shaofeng Zhang[1]; Yong-Seung Shin[1]; Richard Mayer[2]; *[1]University of Wyoming, Laramie, WY; [2]USDA-ABDRL, U. of Wyoming, Laramie, WY*

WP 008 **Amino-acids Analysis by Desorption Electrospray Ionization by a Quadrupolar Tandem Mass Spectrometer;** Gaetano Corso; Giuseppe Paglia; Daniela Garofalo; Oceania D'Apolito; *Università di Foggia, Foggia, Italy*

WP 009 **Rapid Spatial Mapping of Chemicals Dispersed Across Surfaces using an Autosampler/DART/TOFMS**; Andrew H. Grange; G. Wayne Sovocool; *U.S. EPA, ORD, Environmental Sciences Division, Las Vegas, NV*

WP 010 **Selective Detection of Oligosaccharides using Reactive Desorption Electrospray Ionization (DESI)**; Hao Chen; Dina R. Justes; R. Graham Cooks; *Purdue University, West Lafayette, IN*

WP 011 **Reactive Desorption Electrospray Ionization for the Analysis of Cyclodextrin Host:Guest Inclusion Complexes**; Joanna E. Barbara; Ronald K. Castellano; John R. Eyler; David H. Powell; *University of Florida, Gainesville, FL*

WP 012 **Mechanistic Studies of Surface Effects by Desorption Electrospray Ionization;** Santosh Soparawalla; Andre Venter; Graham Cooks; *Purdue University Dept. of Chemistry, West Lafayette, IN*

WP 013 **New Enclosed DESI Source for Improved Safety and Ion Transport and Reduced Signal Dependence on Operating Conditions**; Andre Venter; Santosh Soparwalla; R.Graham Cooks; *Purdue University, West Lafayette, IN*

WP 014 **Surface Analysis and Chemical Imaging with DESI: Technology-Related Challenges and Solutions**; Vilmos Kertesz; Gary J. Van Berkel; Sofie P. Pasilis; *Oak Ridge National Lab, Oak Ridge, TN*

WP 015 **Performance Study of an Extended Length Particle Discriminator Interface for Desorption Electrospray Ionization**; Gary J. Van Berkel[1]; Vilmos Vilmos Kertesz[1]; Bradley B. Schneider[2]; Thomas R. Covey[2]; *[1]Oak Ridge National Laboratory, Oak Ridge, TN; [2]MDS SCIEX, Concord, ON, Canada*

WP 016 **Rapid *in-vivo* Analysis of Biofilms by DESI**; Nari Talaty; Yishu Song; Yi-ju Hsieh; Kirill Datsenko; Barry L. Wanner; R. Graham Cooks; *Purdue University, West Lafayette, IN*

WP 017 ***In-vivo* Mass Spectrometry – Application of Desorption Electrospray Ionization in Surgical Environment**; Zoltan Takats[1]; Reka Skoumal[3]; Maria Katona[2]; Blanka Toth[1]; Miklos Toth[3]; *[1]Semmelweis University, Budapest, Hungary; [2]National Medical Center, Budapest, Hungary; [3]Gottsegen National Institute of Cardiology, Budapest, Hungary*

WP 018 **Analysis of Thin Layer Chromatography Plates with Direct Analysis in Real Time Mass Spectrometry**; Julia L. Rummel; John R. Eyler; David H. Powell; *University of Florida, Gainesville, FL*

WP 019 **New Development of Thin Layer Chromatography / Time-of-Flight Mass Spectrometry with DART**; Akihiko Kusai[1]; Kiyotaka Konuma[1]; Mai Kobayashi[1]; David Vargas[2]; *[1]JEOL Ltd., Akishima, Japan; [2]JEOL USA, Inc., Peabody, MA*

WP 020 **Reactive Fused Droplet Electrospray Ionization Mass Spectrometry**; Marcos N Eberlin; Yuri Eberlim Corilo; Rodrigo Ramos Catharino; Patricia Verardi Abdelnur; *State University of Campinas - UNICAMP, Campinas, SP, Brazil*

WP 021 **Desorption Electrospray Ionization Mass Spectrometry for Rapid and Direct Detection of Low Vapor Pressure Chemical and Biological Threat Agent Simulants**; Nathan A. Hagan; Miquel D. Antoine; Timothy J. Cornish; Timothy P. Lippa; Alan F. Becknell; Plamen A. Demirev; *JHU Applied Physics Laboratory, Laurel, MD*

WP 022 **DESI-MS of Intact Bacteria: Application to Microorganism Profile-Based and Biomarker-Based Biodetection**; Yong-Seung Shin[1]; Richard Mayer[2]; Franco Basile[1]; *[1]University of Wyoming, Laramie, WY; [2]USDA - ABDRL U. of Wyoming, Laramie, WY*